Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 22.06.98 Test oil : ISO 4113

Combination No. : 0 402 646 681

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1381K

Governer no. : 0 421 815 561

Cust. part No. : 1349846/0

Customer—spec. information Customer : DAF : XF 250 Motor

Power KW

: 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar :

2.5

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x Length mm :

x inside diameter: 3.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Rack travel in mm: 11.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance °NW

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance "NW : +- 0.70

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

980

Rack travel in mm : 11.35

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 245.0

A01

	+ Rated speed rpm : 1282
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 12.00 Tolerance mm : + 0.25
Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 1370
Spreed	<pre>guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50</pre>
Tolerance cm3/1000 strokes : 5.0	Total discerning 1. 1 0.50
	GUIDE SLEEVE POSITION
Check tolerance cm3/1000S. : 9.0	Rated speed rpm : 1263
The second section of the section of the second section of the	Rack travel in mm : 10.50
Rated speed rpm : 275	+ Tolerance mm : +- 1.30
Rack travel in mm : 3.70 Tolerance mm : + 0.10	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 13.5	Rated speed rpm : 980 Aneroid pressure
Tolerance cm3/1000 strokes : +- 3.0	+ hPa : 1500 + Del. quantity
Check tolerance cm3/1000s. : +- 6.0	cm3/1000 strokes : 245.0 Tolerance
Spreed Tolerance	+ cm3/1000 strokes : +- 1.0 + Check tolerance
cm3/1000 strokes : 8.0 Check tolerance	+ cm3/1000s. : +- 4.0 + Spreed
cm3/1000s. : 12.0	Tolerance + cm3/1000 strokes : 5.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Check tolerance + cm3/1000S. : 9.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 1055 guide sleeve	control lever position degree : 110.0
travel mm : 7.47	tolerance degree : + 4.0
Tolerance mm : +- 0.15	RATED SPEED
Rated speed rpm : 275 guide sleeve	+ rack travel mm : 10.50 + Rated speed rpm : 1045
travel mm : 2.04	+ Tolerance 1/min : +- 5
Tolerance mm : +- 0.20	+ Check + speed 1/min : +- 10
Rated speed rpm : 820 guide sleeve	+ rack travel mm : 4.00
travel mm : 5.14	+ Rated speed rpm : 1130
Tolerance mm : + 0.25	+ Tolerance 1/min : +- 15 + Check
Rated speed rpm : 480 guide sleeve	+ speed 1/min : +- 20
travel mm : 3.34 Tolerance mm : +- 0.25	+ rack travel mm : 0.70 + Tolerance mm : +- 0.70 + Rated speed rpm : 1275
	1

LOW IDLE	
control lever position degree tolerance degree	: 74.0 : ← 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 6.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 980 : 11.35 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.50 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 11.85 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.75 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 11.30 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.90 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 775

rack travel mm Tolerance mm	: 11.85 : +- 0.10
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 775 : 460 : 11.00 : + 0.05
MEASUREMENT	
Rated speed rpm	: 775
Pressure hPa rack travel mm Tolerance mm	: - : 8.30 : + 0.20
Pressure hPa rack travel mm Tolerance mm	: 250 : 9.30 : + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm rack travel mm	: 1500 : 750 : 11.85

Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 750
rack travel mm	: 11.85
Tolerance mm	: +- 0.05
Del. quantity	
cm3/1000 strokes	: 283.0
Tolerance	
cm3/1000 strokes	: +- 2.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed	
Tolerance cm3/1000 strokes	: 10.0
Check tolerance	: 10.0
cmZ/1000c	· 15 በ
cm3/1000s.	: 15.0
cm3/1000s.	: 15.0
cm3/1000s. Aneroid pressure	: 15.0
	: -
Aneroid pressure hPa Rated speed rpm	: 15.0 : – : 600
Aneroid pressure hPa Rated speed rpm Del. quantity	: – : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: -
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: - : 600 : 188.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: – : 600
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - : 600 : 188.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 600 : 188.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: - : 600 : 188.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: - : 600 : 188.0 : + 1.0 : + 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: - : 600 : 188.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: - : 600 : 188.0 : + 1.0 : + 4.0

LOW IDLE

Rated speed rpm	:		275	
Rack travel in mm Tolerance mm Del. quantity	-	+-	3.70 0.10	
	:		13.5	
cm3/1000 strokes Check tolerance	:	+-	3.0	
cm3/1000S. Spreed	:	+-	6.0	
Tolerance cm3/1000 strokes Check tolerance	:		8.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.06.98 Test oil : ISO 4113

Combination No. : 0 402 648 708

Injection pump

Pump designation : PE8P120A320LS7927

EP type number : 0 412 628 934

Governor

Governer design. : RQ300/1050PA1389

Governer no. : 0 421 801 836

Cust. part No. :

Customer-spec. information

Customer : DHI

Motor

: DV15TIS Euro II

Power KW : 310.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110
Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.80 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 : +- 0.50

Tolerance Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.85

Tolerance mm : \leftarrow 0.05

	1.	guide sleeve
Del. quantity		travel mm : 3.98
	258.0	Tolerance mm : + 0.10
	1	10cct Gr 10c 11fti
Tolerance		Rated speed rpm : 560
	+ 1.0	guide sleeve
	1	travel mm : 6.00
Check tolerance	+	Tolerance mm : + 0.10
cm3/1000s. :	← 4.0 →	
_	<u> </u>	Rated speed rpm : 1290
Spreed	+	guide sleeve
	+	travel mm : 11.50
Tolerance	7.0	Tolerance mm : + 0.50
cm3/1000 strokes :	7.0	
Check tolerance	 I	GUIDE SLEEVE POSITION
cm3/1000s. :	10.0	GOIDE SEEEVE FOSTFION
CIII-37 10000	10.0	
	-	control lever
	1	position degree : 106
Rated speed rpm :	300	Rated speed rpm : 800
	+	
Rack travel in mm :	6.00 +	Rack travel in mm : 19.40
	← 0.10 +	Tolerance mm : +- 0.60
Del. quantity	+	
cm3/1000 strokes :	18.0	FIRE LOAD BELTWEN AT FIRE LOAD OTTO
Tolerance	+- 3.0 ‡	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : Check tolerance	- 3.0	Rated speed rpm : 1050
	← 6.0 [‡]	Aneroid pressure
Spreed .	I	hPa : 1800
Tolerance	\perp	Del. quantity
cm3/1000 strokes :	5.0	cm3/1000 strokes : 258.0
Check tolerance	1	Tolerance
cm3/1000s. :	8.0	cm3/1000 strokes : +- 1.0
	+	Check tolerance
	+	cm3/1000s. : +- 4.0
(B) SETTING OF INJECT	TION PUMP +	Spreed
WITH GOVERNOR	+	Tolerance
	+	cm3/1000 strokes : 7.0
CHIEF OF FELLE TO A VEL		Check tolerance
GUIDE SLEEVE TRAVEL	†	cm3/1000s. : 10.0
Rated speed rpm :	1108 I	
guide sleeve	1	
	6.36	CONTROL LEVER
	+- 0.15 	
	+	control lever
Rated speed rpm :	300 +	position degree : 34.0
guide sleeve	+	tolerance degree : +- 4.0
	1.31	
Tolerance mm :	← 0.20 +	control lever
Rated speed rpm :	1050	position degree : 96.0 tolerance degree : +- 4.0
Rated speed rpm : guide sleeve	. 1	total alive degree : T 4.0
travel mm :	6.00 I	RATED SPEED
	+ 0.10 ↓	rack travel mm : 12.60
. = == := := := : : : : : : : : : : : :	1	Rated speed rpm : 1102
Rated speed rpm :	441	Tolerance 1/min : + 8
	+	
	•	

rack travel mm : Rated speed rpm : Tolerance 1/min :		Pressure hPa rack travel mm Tolerance mm	: 1800 : 13.85 : + 0.10
rack travel mm : Tolerance mm : Rated speed rpm :		Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: - : 8.50
		2-stage LDA setti	ng
LOW IDLE		Rated speed rpm Pressure hPa rack travel mm	: 800
control lever position degree : tolerance degree :	71.0 +- 4.0	MEASUREMENT +	
control lever		+ Rated speed rpm	: 500
position degree : tolerance degree :	+- 4.0	Pressure hPa rack travel mm Tolerance mm	: 600 : 11.70 : + 0.20
Setting point w/out	bumper spring	+ Pressure hPa	: 300
Rated speed rpm :	200	rack travel mm	: 9.60
CRT mm min. :	> 7.50	+ Pressure hPa	: 1400
Testing:		rack travel mm Tolerance mm	: 13.50 : +- 0.10
Tolerance mm :	300 6.00 +- 0.10 2.00	Pressure hPa rack travel mm Tolerance mm	: 1200
Rated speed rpm :	430 +- 30	Start interlock	
TORQUE CONTROL Rated speed rpm :	1050	Rated speed rpm Rated speed rpm	
	13.85 ← 0.05	Check speed 1/min	: > 185
rack travel mm :	600 13.85 ← 0.10	Check speed 1/min	: < 260
Rated speed rom :	500 12.65	+ FUEL DELIVERY CHA	RACTERISTICS
	12.65 +- 0.10	Aneroid pressure hPa Rated speed rpm	: 1800 : 600
ANEROID/ALTITUDE COMPENSATOR TEST		Del. quantity cm3/1000 strokes	
		Tolerance cm3/1000 strokes	: +- 3.0
SETTING		Check tolerance cm3/1000s.	: +- 6.0
	E00	1	

A07

Rated speed rpm : 500

Aneroid pressure

800 hPa 500 Rated speed rpm

12.65 rack travel mm Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 229.0

Tolerance

cm3/1000 strokes : \leftarrow 4.0

Check tolerance

cm3/1000s. 6.0

Aneroid pressure

hPa 500 Rated speed rpm Del. quantity

cm3/1000 strokes : 128.0

Tolerance

cm3/1000 strokes : +-1.0

Check tolerance

cm3/1000s. 4.0

STARTING FUEL DELIVERY

100 Rated speed rpm

Del. quantity

cm3/1000 strokes : 233.0

Tolerance

cm3/1000 strokes : +- 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

300 Rated speed rpm

Rack travel in mm : 6.00 Tolerance mm : **←** 0.10 Del. quantity cm3/1000 strokes : 18.0 Tolerance

cm3/1000 strokes : +-3.0 Check tolerance

cm3/1000s.

: +-6.0 Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 18.06.98 Test oil : ISO 4113

Combination No. : 0 402 648 785

Injection pump

Pump designation : PE8P120A320LS7844 EP type number : 0 412 628 860

Governor

Governer design. : RQV350...1050PA1318

Governer no. : 0 421 814 185

Cust. part No. : 0270746302

Customer—spec. information Customer : MB-NFZ Motor : 0M442 LA Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 : +- 2.0 Tolerance °C

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 130
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. 8

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 15.30 Tolerance mm : +- 0.05

+	guide sleeve
Del. quantity cm3/1000 strokes : 272.0	travel mm : 3.62 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1204 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 10.00 Tolerance mm : + 0.25
Spreed	Rated speed rpm : 1300 guide sleeve
Tolerance cm3/1000 strokes : 5.0	travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 9.0	GUIDE SLEEVE POSITION
	- control lever - position degree : - 1
Rated speed rpm : 350	Rated speed rpm : 1174
Rack travel in mm : 4.80 Tolerance mm : +- 0.10 Del. quantity	Rack travel in mm : 11.00 Tolerance mm : +- 1.30
cm3/1000 strokes : 19.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0	•
Check tolerance cm3/1000s. : +- 6.0	- Rated speed rpm : 1050 - Aneroid pressure
Spreed Tolerance	hPa : 1800 Del. quantity
cm3/1000 strokes : 6.0 + Check tolerance	cm3/1000 strokes : 272.0 Tolerance
cm3/1000s. : 10.0	cm3/1000 strokes : +- 1.0
‡	- Check tolerance - cm3/1000S. : +- 4.0
(B) SETTING OF INJECTION PUMP	- Spreed - Tolerance
1	- cm3/1000 strokes : 5.0
GUIDE SLEEVE TRAVEL	Check tolerance cm3/1000s. : 9.0
Rated speed rpm : 1106	
guide sleeve travel mm : 8.02	CONTROL LEVER
Tolerance mm : + 0.15	- control lever
Rated speed rpm : 350 guide sleeve	position degree : 122.0
travel mm : 1.48	tolerance degree : +- 4.0
Tolerance mm : + 0.20	RATED SPEED : 14.30
Rated speed rpm : 900	Rated speed rpm : 1095
guide sleeve travel mm : 5.69	Tolerance 1/min : +- 5
Tolerance mm : + 0.25	rack travel mm : 4.00 Rated speed rpm : 1190
Rated speed rpm : 580	Tolerance 1/min : +- 15

rack travel mm Tolerance mm Rated speed rpm	: 0.50 : +- 0.50 : 1300
LOW IDLE	
control lever position degree tolerance degree	: 66.0 : +- 4.0
Setting point w/or	ut bumper spring
Rated speed rpm	: 250
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 4.80 : ← 0.10
Rated speed rpm	: 450
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 15.30 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 15.30 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
CRT ZERO POSITION	
Rack travel in mm Tolerance mm	: 8.40 : +- 0.20
Rated speed rpm Pressure hPa	: 500 : -
MEASUREMENT	
Pressure hPa rack travel mm Tolerance mm	: 700 : 5.00 : +- 0.20
Pressure hPa	: 180

rack travel mm Tolerance mm	: 0.40 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 270
Check speed 1/min Check	: > 80
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity	: 1800 : 800
cm3/1000 strokes Tolerance	: 274.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000s.	: +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
REDUCED QUANTITY	
Aneroid pressure hPa Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL	IVERY
Rated speed rpm Del. quantity	: 100
cm3/1000 strokes	: 270.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 4.80Tolerance mm : $\leftarrow 0.10$

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 18.06.98 : ISO 4113

Combination No. : 0 402 648 967

Injection pump

Pump designation : PE8P12CA320LS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: -1K

Governer no.

: 0 421 815 361

Cust. part No. : 9275447

Customer-spec. information Customer : LIEBHERR : D 9408 TI Motor

Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

: 40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 190
Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 300.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 4.0	Rated speed rpm : 450 guide sleeve
Spreed	travel mm : 3.66 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1320 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 13.50 Tolerance mm : +- 0.50
	GUIDE SLEEVE POSITION
Rated speed rpm : 350	‡
Rack travel in mm : 4.90 Tolerance mm : +- 0.10	control lever position degree : - 1 Rated speed rpm : 1185
Del. quantity cm3/1000 strokes : 30.0	+
Tolerance cm3/1000 strokes : + 3.0	Rack travel in mm : 10.80 Tolerance mm : +- 2.70
Check tolerance cm3/1000s. : +- 6.0	FILL LOAD DELTHERY AT ELLE LOAD OTOD
Spreed Tolerance cm3/1000 strokes : 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1050
Check tolerance cm3/1000s. : 10.0	Aneroid pressure hPa : 1600
. 10.0	Del. quantity cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000s. : +- 4.0 Spreed
Rated speed rpm : 1117	Tolerance cm3/1000 strokes : 5.0
guide sleeve travel mm : 10.38	Check tolerance cm3/1000s. : 9.0
Tolerance mm : +- 0.25	+
Rated speed rpm : 300 guide sleeve	CONTROL LEVER
travel mm : 1.69 Tolerance mm : +- 0.25	control lever
Rated speed rpm : 746 guide sleeve	+ position degree : 119.0 + tolerance degree : +- 4.0
travel mm : 6.20	RATED SPEED
Tolerance mm : + 0.25	rack travel mm : 11.75 Rated speed rpm : 1110
Rated speed rpm : 353 guide sleeve	Tolerance 1/min : +- 5
travel mm : 2.45 Tolerance mm : +- 0.25	+ rack travel mm : 4.00 + Rated speed rpm : 1205 + Tolerance 1/min : +- 15
Rated speed rpm : 403 guide sleeve	+ Tolerance 1/min : +- 15 + - rack travel mm : 0.50
travel mm : 3.18	Tolerance mm : +- 0.50
Tolerance mm : +- 0.25	+ Rated speed rpm : 1300

		1 Pagazuna hDa	
		+ Pressure hPa + rack travel mm	. 9 15
		+ Tolerance mm	
LOW IDLE		MEASUREMENT	
		Rated speed rpm	: 550
control lever position degree tolerance degree		+ Pressure hPa + rack travel mm + Tolerance mm	: 10.10
Setting point w/ou	t bumper spring	+	
Rated speed rpm	: 250	+ Pressure hPa + rack travel mm + Tolerance mm	: 9.75
CRT mm min.	: > 6.80	Total and man	0.15
Testing:		Start interlock	
Rated speed rpm rack travel mm Tolerance mm	: 4.90	Rated speed rpm Rated speed rpm Check	: > 100 : < 290
Rated speed rpm	: 400	+ speed 1/min + Check	: > 80
TORQUE CONTROL		speed 1/min	: < 300
Rated speed rpm rack travel mm		FUEL DELIVERY CHA	ARACTERISTICS
	: 500 : 10.30 : ← 0.10	Aneroid pressure hPa Rated speed rpm Del. quantity	: 1600 : 500
Rated speed rpm rack travel mm Tolerance mm	: 550 : 10.45 : +- 0.10	+ cm3/1000 strokes + Tolerance + cm3/1000 strokes	: +- 3.0
Rated speed rpm rack travel mm Tolerance mm	: 11.40	cm3/1000s.	
Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.60	rack travel mm Tolerance mm	
ANEROID/ALTITUDE		Aneroid pressure hPa Rated speed rpm	: 1600 : 700
COMPENSATOR TEST		Del. quantity cm3/1000 strokes Tolerance	: 299.0
SETTING		+ cm3/1000 strokes	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 550 : 1600 : 10.45	- Check tolerance cm3/1000s.	
Tolerance mm	: +- 0.10	Aneroid pressure hPa	
Rated speed rpm	: 550	+ Rated speed rpm	· : 550

A15

Del. quantity cm3/1000 strokes : 242.5 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.15
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 200.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000S. : + 20.0

LOW IDLE

Rated speed rpm : 350 4.90 Rack travel in mm: Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000S. : +-6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000S. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : ISO 4113

: 18.06.98

Combination No. : 0 402 648 967A

Injection pump

Pump designation : PE8P120A320LS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: -1K

Governer no.

: 0 421 815 361

Cust. part No. : 9275448

Customer-spec. information Customer : LIEBHERR : D 9408 TI Motor

Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 190 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke min : +- 0.05 Tolerance mm

Check

: +- 0.10 tolerance mm

Rack travel in mm: 10.50 : +- 0.50 Tolerance mm

: 1- 8- 7- 2- 6 : - 3- 5- 4 Firing order

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : **←** 0.50

Check

tolerance "NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 300.0

Tolerance

cm3/1000 strokes : + 1.0

A17

Check tolerance cm3/1000S. : + 4.0	+ Rated speed rpm : 450
	+ guide sleeve
Spreed	+ travel mm : 3.66 + Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1320
Check tolerance cm3/1000s. : 9.0	+ guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
	GUIDE SLEEVE POSITION
Rated speed rpm : 350	+
Rack travel in mm: 4.90	t control lever
Tolerance mm : \leftarrow 0.10	position degree : - 1
Del. quantity cm3/1000 strokes : 30.0	Rated speed rpm : 1185
Tolerance	Rack travel in mm : 10.80
cm3/1000 strokes : +- 3.0	Tolerance mm : + 2.70
Check tolerance cm3/1000s. : +- 6.0	<u> </u>
Spreed . +- 0.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+
cm3/1000 strokes : 6.0	+ Rated speed rpm : 1050
Check tolerance cm3/1000s. : 10.0	+ Aneroid pressure + hPa : 1600
. 10.0	+ Del. quantity
	+ cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ Tolerance + cm3/1000 strokes : +- 1.0
WITH GOVERNOR	Check tolerance
	+ cm3/1000s. : $+$ 4.0
GUIDE SLEEVE TRAVEL	+ Spreed + Tolerance
Rated speed rpm : 1117	+ cm3/1000 strokes : 5.0
guide sleeve	+ Check tolerance
travel mm : 10.38	+ cm3/1000s. : 9.0
Tolerance mm : + 0.25	Ī
Rated speed rpm : 300	+
guide sleeve	+ CONTROL LEVER
travel mm : 1.69 Tolerance mm : + 0.25	control lever
	position degree : 119.0
Rated speed rpm : 746	tolerance degree : + 4.0
guide sleeve travel mm : 6.20	RATED SPEED
Tolerance mm : +- 0.25	rack travel mm : 11.75
	Rated speed rpm : 1110
Rated speed rpm : 353 guide sleeve	Tolerance 1/min : +- 5
travel mm : 2.45	rack travel mm : 4.00
Tolerance mm : +- 0.25	+ Rated speed rpm : 1205 + Tolerance 1/min : + 15
Rated speed rpm : 403	+ Tocordina Printing
guide sleeve	rack travel mm : 0.50
travel mm : 3.18 Tolerance mm : + 0.25	+ Tolerance mm : + 0.50 + Rated speed rpm : 1300
roter appendix . To U.E.	T varen sheed thin . 1200

LOW IDLE control lever position degree : 75.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm 200 : : > 6.80 CRT mm min. Testing: Rated speed rpm 350 rack travel mm 4.90 : +- 0.10 Tolerance mm Rated speed rpm : 400 TORQUE CONTROL 1050 Rated speed rpm : rack travel mm 12.75 Tolerance mm : +- 0.05 500 Rated speed rpm : rack travel mm 10.30 : + 0.10Tolerance mm Rated speed rpm : *5*50 10.45 rack travel mm : **←** 0.10 Tolerarice mm Rated speed rpm : 700 rack travel mm : 11.40 : ← 0.15 Tolerance mm 950 Rated speed rpm : rack travel mm : 12.60 : **←** 0.15 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING 550 Rated speed rpm : Pressure hPa 1600 rack travel mm 10.45 Tolerance mm : + 0.10 Rated speed rpm 550

Pressure hPa rack travel mm Tolerance mm	: - : 9.15 : + 0.20
MEASUREMENT	
Rated speed rpm	: 550
Pressure hPa rack travel mm Tolerance mm	: 630 : 10.10 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 575 : 9.75 : + 0.15
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 290
Check speed 1/min	: > 80
Check speed 1/min	: < 300
FUEL DELIVERY CHA	RACTERISTICS
	
Aneroid pressure hPa Rated speed rpm	: 1600 : 500
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 500
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 292.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 500 : 292.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 292.0 : ← 3.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 292.0 : ← 3.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa	: 500 : 292.0 : ← 3.0 : ← 6.0 : 10.45 : ← 0.10
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity	: 500 : 292.0 : + 3.0 : + 6.0 : 10.45 : + 0.10 : 1600 : 700
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 500 : 292.0 : + 3.0 : + 6.0 : 10.45 : + 0.10 : 1600 : 700 : 299.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 292.0 : ← 3.0 : ← 6.0 : 10.45 : ← 0.10 : 1600 : 700 : 299.0 : ← 3.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 500 : 292.0 : + 3.0 : + 6.0 : 10.45 : + 0.10 : 1600 : 700 : 299.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 500 : 292.0 : ← 3.0 : ← 6.0 : 10.45 : ← 0.10 : 1600 : 700 : 299.0 : ← 3.0

Del. quantity			
cm3/1000 strokes	:	242.5	
Tolerance			
cm3/1000 strokes	: +-	1.5	
Check tolerance			
cm3/1000s.	: +-	4.0	
Spreed			
Tolerance			
cm3/1000 strokes	:	8.0	
Check tolerance			
cm3/1000s.	:	12.0	

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 10.15
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 200.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance

LOW IDLE

cm3/1000s.

Rated speed rpm 350 4.90 Rack travel in mm: Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

: +- 20.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 24.06.98 Test oil : ISO 4113

Combination No. : 0 402 744 809

Injection pump

Pump designation : PES4P120A320RS7312

: -1

EP type number : 0 412 724 803

Governor

Governer design. : RQV400...1200PA1397

Governer no. : 0 421 814 212

Cust. part No. : 51.11103-7579

Customer-spec. information

Customer : MAN

: D 0824 LOH 05 Motor : 114.0

Power KW

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity
min. l/h : 120
Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

: 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 5.25 : ← 0.05 Prestroke mm Tolerance mm

Check

: + 0.10 tolerance mm

: 1-3-4-2 Firing order

: 0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance "NW : + 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.80 Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 208.0

Tolerance cm3/1000 strokes : +- 1.0	+ guide sleeve + travel mm : 13.50 + Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	
Spreed	_ + GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 8.0	control lever position degree : 109 Rated speed rpm : 1322
Check tolerance : 12.0	Rack travel in mm : 11.80 Tolerance mm : + 1.30
Rated speed rpm : 400	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.80 Tolerance mm : + 0.10 Del. quantity	Rated speed rpm : 1000 Aneroid pressure hPa : 1200
cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : +- 3.0	- Del. quantity - cm3/1000 strokes : 208.0 - Tolerance
Check tolerance cm3/1000S. : +- 6.0 Spreed	- cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes : 8.0	- Spreed - Tolerance
Check tolerance cm3/1000S. : 12.0	+ cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000S. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVED
CIATE OF THE TRAIN	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	<pre>+ control lever + position degree : 302.0</pre>
Rated speed rpm : 1261 guide sleeve	tolerance degree : + 4.0
guide sleeve travel mm : 10.26 Tolerance mm : + 0.15	+ RATED SPEED + rack travel mm : 11.80 + Rated speed rpm : 1250
Rated speed rpm : 400 guide sleeve	+ Tolerance 1/min : +- 8
guide sleeve travel mm : 2.21 Tolerance mm : +- 0.20	+ rack travel mm : 4.00 + Rated speed rpm : 1345 + Tolerance 1/min : +- 15
Rated speed rpm : 822 guide sleeve	rack travel mm : 0.50
guide sleeve travel mm : 5.79 Tolerance mm : +- 0.25	rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1400
Rated speed rpm : 500 guide sleeve	<u> </u>
guide sleeve travel mm : 3.53 Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1490	‡

control lever position degree tolerance degree	: 262.0 : ← 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 300
CRT mm min.	: > 7.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 400 : 4.80 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 2.00 : 494 : + 20
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.80 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1200 : 12.80 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 700 : 12.80 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1200 : 12.80 : ← 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : − : 8.60 : ← 0.15
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 140 : 8.90 : + 0.10

Pressure hPa rack travel mm Tolerance mm	: 450 : 11.80 : +- 0.15
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
Aneroid pressure hPa Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1200 : 700 : 12.80 : + 0.10 : 217.0 : + 3.0 : + 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
STARTING FUEL DEL Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 100.0
LOW IDLE	

Rated speed rpm	:	400
Rack travel in mm	:	4.80
Tolerance mm	:	+- 0.10
Del. quantity		
cm3/1000 strokes	:	40.0
Tolerance		
cm3/1000 strokes	:	+- 3.0
Check tolerance		
cm3/1000s.	:	 6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 19.06.98 Test oil : 19.06.96

Combination No. : 0 402 746 609

Injection bumb

Pump designation : PES6P130A720RS7411

EP type number : 0 412 736 808

Governor

Governer design. : RQ275/950PA1274 Governer no. : 0 421 801 807

Cust. part No. : 645 739

Customer-spec. information

Customer : RABA

Motor : SIEHE BEMERKUNG Power KW : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 160
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 5.50 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 600

Rack travel in mm : 11.90

Tolerance mm : +- 0.05

	† guide sleeve
Del. quantity cm3/1000 strokes : 224.0	† travel mm : 4.45 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 450 guide sleeve
Check tolerance cm3/1000s. : + 4.0	travel mm : 6.00 Tolerance mm : + 0.10
Spreed	Rated speed rpm : 1200 guide sleeve
Tolerance : 5.0	travel mm : 11.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : 9.0	GUIDE SLEEVE POSITION
Rated speed rpm : 275	control lever position degree : 109 Rated speed rpm : 900
Rack travel in mm : 4.20 Tolerance mm : + 0.10 Del. quantity	Rack travel in mm : 20.00 Tolerance mm : +- 0.80
cm3/1000 strokes : 24.0 - Tolerance - cm3/1000 strokes : + 3.0 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s. : + 6.0 - Spreed	Rated speed rpm : 600 Aneroid pressure hPa : 1500
Tolerance - 8.0 - Check tolerance	Del. quantity cm3/1000 strokes : 224.0 Tolerance
cm3/1000s. : 12.0	cm3/1000 strokes : +- 1.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	cm3/1000S. : +- 4.0 Spreed Tolerance
	cm3/1000 strokes : 5.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000S. : 9.0
Rated speed rpm : 1007 - guide sleeve - travel mm : 6.56 -	CONTROL LEVED
travel mm : 6.56 Tolerance mm : + 0.15	CONTROL LEVER control lever
Rated speed rpm : 275 - guide sleeve -	position degree : 33.0 tolerance degree : +- 4.0
travel mm : 2.06 - Tolerance mm : + 0.20 -	control lever
Rated speed rpm : 950	position degree : 95.0 tolerance degree : +- 4.0
guide sleeve	
travel mm : 6.00 - Tolerance mm : + 0.10 -	RATED SPEED rack travel mm : 10.90 Rated speed rpm : 995
Rated speed rpm : 361	Tolerance 1/min : +- 5

rack travel mm : 4.00 Rated speed rpm : 1095 Tolerance 1/min : + 15 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1200	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 8.20 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 500
<u> </u>	Pressure hPa : 260 rack travel mm : 9.20
LOW IDLE	Pressure hPa : 260 rack travel mm : 9.20 Tolerance mm : +- 0.15
+	Pressure hPa : 440
control lever position degree : 73.0 tolerance degree : + 4.0	rack travel mm : 11.00 Tolerance mm : +- 0.05
control lever position degree : 12.0	Start interlock
tolerance degree : +- 4.0	Rated speed rpm : > 175 Rated speed rpm : < 200
Setting point w/out bumper spring	Check
Rated speed rpm : 175	speed 1/min : > 155 Check
CRT mm min. : > 6.80	speed 1/min : < 220
Testing:	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 275	
rack travel mm : 4.20 Tolerance mm : + 0.10	Aneroid pressure
Total and the day	hPa : 1500
rack travel mm : 2.00	Rated speed rpm : 950
Rated speed rpm : 335	Del. quantity
Tolerance 1/min : + 20	cm3/1000 strokes : 219.5 Tolerance
TORQUE CONTROL	cm3/1000 strokes : +- 3.0 Check tolerance
Rated speed rpm : 600 rack travel mm : 11.90 Tolerance mm : + 0.05	cm3/1000s. : +- 6.0
+	Aneroid pressure
Rated speed rpm : 950	hPa : - Rated speed rpm : 500
rack travel mm : 11.90 Tolerance mm : + 0.10	Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 147.0
	Tolerance
ANEROID/ALTITUDE	cm3/1000 strokes : + 2.0
COMPENSATOR TEST	Check tolerance cm3/1000s. : +- 4.0
SETTING	
Rated speed rpm : 500 Pressure hPa : 1500	STARTING FUEL DELIVERY
rack travel mm : 11.90 Tolerance mm : + 0.05	Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : +- 0.50

Del. quantity

cm3/1000 strokes : 110.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 4.20 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 24.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.06.98 : ISO 4113

Combination No. : 0 402 846 302

Injection pump

Pump designation : PE6P120A320RS8520 EP type number : 0 412 826 202

Governor

Governer design. : RQV275...1000PA1269K

Governer no. : 0 421 815 969

Cust. part No. : 1310222/2

Customer—spec. information : DAF Customer

Motor

: XF 355 M

Power KW

: 355.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

: 208.5

bar

Tolerance bar : +- 1.5

B01

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.C Tolerance bar : +- 1.0

Prestroke mm : 4.85 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance "NW

: +- 0.75

Start of delivery mark

Tolerance

: +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 14.05

Tolerance mm : + 0.05

	4	guide sleeve
Del. quantity		travel mm : 13.50
cm3/1000 strokes	: 344.0	Tolerance mm : +- 0.50
- 1		
Tolerance	: +- 1.0	CHINE OF FELLE DOCUTION
cm3/1000 strokes	: 1.0	GUIDE SLEEVE POSITION
Check tolerance		Rated speed rpm : 1121
cm3/1000s.	: +- 5.0	· · · · · · · · · · · · · · · · · · ·
		Rack travel in mm : 13.30
Spreed	-	Tolerance mm : +- 1.30
	+	•
Tolerance		FIRE LOAD DELIVEDY AT FULL LOAD CTOD
cm3/1000 strokes	: 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance		Rated speed rpm : 980
cm3/1030s.	: 13.0	Aneroid pressure
		hPa : 1500
		Del. quantity
	+	cm3/1000 strokes : 344.0
Rated speed rpm	: 275	Tolerance
		cin3/1000 strokes : + 1.0
Rack travel in mm		Check tolerance
Tolerance mm	: ← 0.10	$cm3/1000s$. : \leftarrow 5.0
Del. quantity	1, 5	Spreed
cm3/1000 strokes Tolerance	: 14.5	· Tolerance · cm3/1000 strokes : 8.0
cm3/1000 strokes	30	Check tolerance
Check tolerance	3.0	- cm3/1000s. : 13.0
cm3/1000s.	: +- 6.0	. 13.0
Spreed		
Tolerance	4	
cm3/1000 strokes	: 6.0	CONTROL LEVER
Check tolerance	+	
cm3/1000s.	: 12.0	control lever
	+	position degree : 118.0
4-3	·	tolerance degree : +- 4.0
(B) SETTING OF INJ	ECTION PUMP	
WITH GOVERNOR	†	RATED SPEED
	†	rack travel mm : 13.05
GUIDE SLEEVE TRAVE		Rated speed rpm : 1045 Tolerance 1/min : +- 5
SOTAL SPECAL LUNAL	· -	· Tolerance 1/min : +- 5 · Check
Rated speed rpm	: 1058	speed 1/min : +- 10
guide sleeve	. ,,,,,,	
travel mm	: 9.97	rack travel mm : 4.00
Tolerance mm	: ← 0.15	Rated speed rpm : 1140
	+	Tolerance 1/min : +- 15
Rated speed rpm	: 275	Check
guide sleeve	- +	speed 1/min : +- 20
travel mm	: 2.04	
Tolerance mm	: ← 0.20	rack travel mm : 0.70
Dated opend now	. 300	Tolerance mm : +- 0.70
Rated speed rpm guide sleeve	: 399	Rated speed rpm : 1275
travel mm	: 3.65	
Tolerance mm	: + 0.25	
TACEL OF THE]	
Rated speed rpm	: 1260	LOW IDLE
man abase than	· = - =	· · · · · · · · · · · · · · · · · · ·

control lever position degree tolerance degree	: 73.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 6.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 4.20 : +- 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance num	: 800 : 14.05 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.80 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.45 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 980 : 14.30 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 980 : 1500 : 14.05 : +- 0.05

Rated speed rpm	: 980
Pressure hPa	: -
rack travel mm	: 9.00
Tolerance mm	: + 0.10
MEASUREMENT	
Rated speed rpm	: 980
Pressure hPa	: 750
rack travel mm	: 12.80
Tolerance mm	: + 0.05
Pressure hPa	: 380
rack travel mm	: 10.30
Tolerance mm	: +- 0.15

FUEL DELIVERY CHARACTERISTICS

Ameroid pressure hPa Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1500 : 750 : 13.80 : + 0.05 : 361.0 : + 2.0 : + 6.0 : 10.0 : 15.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - 600 : 199.0 : + 1.0 : + 5.0 : 10.0 : 15.0

LOW IDLE

Rated speed rpm	:		275
Rack travel in mm	-		4.20 0.10
Del. quantity	•	-	
cm3/1000 strokes Tolerance	:		14.5
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes	:		6.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 14.05.98 : ISO 4113

Combination No. : 0 403 476 146

Injection pump

Pump designation : PES6MW100/320RS1245

EP type number : 0 413 406 247

Governor

Governer design. : RSV300...1100MW0A400

Governer no. : 0 420 085 293

Cust. part No. : 11032700 P02 v.02.98

Customer-spec. information

Customer

: VCE

Motor

: TD 63KDE

Power KW

: 90.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 046

Inlet press. bar : 1.5

Tolerance l/h: +- 20.0

Test nozzle holde

assembly

: 0 688 901 101

Opening pressure

: 208.5

Tolerance bar

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 31.0 Tolerance bar : +- 1.0

Prestroke mm : 3.05 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.90

Tolerance mm : \leftarrow 0.50

Firing order

: 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300 : +- 0.50

Tolerance

Check

tolerance °NW

: + 0.75

Start of delivery mark

Tolerance Check

: +- 0.50

tolerance °NW

: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 12.40

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 106.0

1	No.
Tolerance	· Del. quantity · cm3/1000 strokes : 106.0
cm3/1000 strokes : + 1.0	Tolerance
Chist toop set ones 1.0	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance
cm3/1000s. : +- 3.0	
CIII37 10005 += 3.0	· · ·
Speed	- Spreed
Spreed	- Tolerance - cm3/1000 strokes : 3.5
Talanana	
Tolerance 7.5	Check tolerance
cm3/1000 strokes : 3.5	cm3/1000s. : 6.0
Charle Astronom	•
Check tolerance	•
cm3/1000s. : 6.0 +	CONTROL LEVER
	CONTROL LEVER
. †	
	control lever
Rated speed rpm : 315	position degree : 81.0
T	tolerance degree : +- 4.0
Rack travel in mm: 5.50	
Tolerance mm : + 0.10 +	RATED SPEED
Del. quantity +	rack travel mm : 11.30
cm3/1000 strokes : 17.0 +	Rated speed rpm : 1140
Tolerance +	· Tolerance 1/min : +- 5
cm $3/1000$ strokes : $+$ 2.0	
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1260
Spreed +	· Tolerance 1/min : +- 15
Tolerance +	•
cm $3/1000$ strokes : 3.5	rack travel mm : 1.00
Check tolerance +	Tolerance mm : +- 0.70
cm3/1000s. : 5.5	Rated speed rpm : 1420
+	•
+	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP +	Rated speed rpm : 1270
WITH GOVERNOR	Tolerance 1/min : +- 15
+	
+	
	•
GUIDE SLEEVE POSITION +	
+	LOW IDLE
+	•
control lever +	
position degree : -3 +	control lever
Rated speed rpm : 800	position degree : 106.0
+	tolerance degree : +- 4.0
Rack travel in mm : 0.65	•
Tolerance mm : + 0.35 +	 Setting point w/out bumper spring
+	•
governor spring	Rated speed rpm : 315
pre-tension +	rack travel mm : 5.00
click setting $x : 5.00$	Tolerance mm : +- 0.10
+	
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	•
4	CRT mm min. : > 19.50
Rated speed rpm : 1100	•
Aneroid pressure	Testing:
hPa : 1500	
4	Rated speed rpm : 315
· · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •

rack travel mm Tolerance mm	: 5.50 : ← 0.10
rack travel mm Rated speed rpm Tolerance 1/min	: 580
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1100 : 12.40 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 900 : 12.70 : + 0.20
Rated speed rpm	: 740 : 13 20
	: 13.20 : + 0.10
Tolerance mm ANEROID/ALTITUDE	: + 0.10
rack travel mm Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING	: + 0.10
Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST	: + 0.10 : 500 : 1500 : 13.50
Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: + 0.10 : 500 : 1500 : 13.50 : + 0.10
Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: + 0.10 : 500 : 1500 : 13.50 : + 0.10 : 500 : - : 10.90
Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa	: + 0.10 : 500 : 1500 : 13.50 : + 0.10 : 500 : - : 10.90 : + 0.10
Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: + 0.10 : 500 : 1500 : 13.50 : + 0.10 : 500 : - : 10.90 : + 0.10

Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 500
Del. quantity	
cm3/1000 strokes	: 121.0
Tolerance cm3/1000 strokes	: +- 1.5
Check tolerance	: +- 1.5
cm3/1000S.	: +- 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 5.0
Check tolerance	7.0
cm3/1000s.	: 7.0
rack travel mm	: 12.70
Tolerance mm	: +- 0.20
Aneroid pressure	
hPa	
Rated speed rpm	· : 500
Del. quantity	. 500
cm3/1000 strokes	: 73.0
Tolerance	
cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000s.	: ← 3.0
	
STARTING FUEL DEL	IVERY
Rated speed rpm	: 100
rack travel mm	: 20.00
Tolerance mm	: +- 1.00

Rated speed rpm	:	100
rack travel mm	:	20.00
Tolerance mm	: +-	- 1.00
Del. quantity		
cm3/1000 strokes	:	100.0
Tolerance		
cm3/1000 strokes	: +-	- 5.0
Check tolerance		
cm3/1000S.	: +-	- 8.0

LOW IDLE

Rated speed rpm	:		315
Rack travel in mm Tolerance mm Del. quantity	:	+	5.50 0.10
cm3/1000 strokes Tolerance	:		17.0
cm3/1000 strokes Check tolerance	:	+-	2.0
cm3/1000s. Spreed	:	+-	4.5

Tolerance

cm3/1000 strokes : 3.5 Check tolerance cm3/1000s. : 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26,06,98 : ISO 4113

Combination No. : 0 400 463 115

Injection pump

Pump designation : PES3A80D320/3RS1299

EP type number : 0 410 483 015

Governor

Governer design. : RSV325...1500A2C505R

Governer no. : 0 420 233 187

Cust. part No. :

Customer-spec. information Customer : MWM

Motor

: D226-3

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

Overflow valve

: 1 419 992 198

Inlet press. bar : 1.0

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

173.5

Tolerance bar

: + 1.5

Test lines : 1 680 750 014

Outside diameter :

6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm 2.25 Tolerance mm : + - 0.05

Check

tolerance mm : + - 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1- 2- 3

Phasing

: 0-120-240

Tolerance Check

tolerance °NW

: **←** 0.50 : **←** 0.75

BASIC SETTING

Rated speed rpm : 1480

Rack travel in mm: 9.00

Tolerance mm

: **←** 0.05

Del. quantity

cm3/1000 strokes :

48.5

Tolerance

cm3/1000 strokes : \leftarrow 0.5

: +- 2.0

Check tolerance

cm3/1000s.

Tolerance

Spreed

cm3/1000 strokes : 2.5

B09

Charle had as assess		
Check tolerance cm3/1000s.	: 4.0	CONTROL LEVER
CIID/ 10003.	· • • • • • • • • • • • • • • • • • • •	CONTROL LEVER
	+	control lever
	+	position degree : 108.0
Rated speed rpm	: 325	tolerance degree : +- 4.0
Rack travel in mm	. 7.50	RATED SPEED
Tolerance mm		rack travel mm : 8.00
Del. quantity	+	Rated speed rpm : 1525
cm3/1000 strokes	: 12.0	Tolerance 1/min : + 5
Tolerance cm3/1000 strokes	†	mode travel or 1 00
Check tolerance	1 - 3.0	rack travel mm : 4.00 Rated speed rpm : 1560
cm3/1000s.	: +- 4.5	Tolerance 1/min : +- 15
Spreed	+	
Tolerance	1	rack travel mm : 0.85
cm3/1000 strokes Check tolerance	: 2.0	Tolerance mm : +- 0.55 Rated speed rpm : 1720
cm3/1000s.	: 3.5	Rated speed rpm : 1720
	+	rack travel mm : 4.00
4-8	+	Rated speed rpm : 1570
(B) SETTING OF INJ	ECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR	İ	
	1	
		
GUIDE SLEEVE POSIT	TON +	LOW IDLE
	<u>†</u>	
control lever	Į	control lever
position degree	: - 3	position degree : 72.0
Rated speed rpm	: 800 +	tolerance degree : +- 4.0
Rack travel in mm	. 0.50	Satting paint Walt human anning
Tolerance mm		Setting point w/out bumper spring
rocci at ioc inan	1	Rated speed rpm : 325
governor spring	+	rack travel mm : 7.00
pre-tension	,	Tolerance mm : \leftarrow 0.10
click setting x	: 3.00 +	Pated aread pro . 100
	I	Rated speed rpm : 100
FULL LOAD DELIVERY	AT FULL LOAD STOP	CRT mm min. : > 19.50
- · ·	+	
Rated speed rpm	: 1480 +	Testing:
Aneroid pressure hPa	· - I	Rated speed rpm : 325
Del. quantity	·	rack travel mm : 7.50
cm3/1000 strokes	: 48.5 ↓	Tolerance mm : + 0.10
Tolerance	+	
cm3/1000 strokes	: +- 0.5	rack travel mm : 2.00
Check tolerance cm3/1000s.	: +- 2.0	Rated speed rpm : 485 Tolerance 1/min : +- 30
Spreed	1	10001 at 100 17 mill . 1 50
Tolerance	1	
7 4 5 5 5 5		
cm3/1000 strokes	: 2.5	TORQUE CONTROL
Check tolerance	+	Rated speed rpm : 1480
	: 2.5 : 4.0	

Start interlock

Rated speed rpm : > 100

Check

: > speed 1/min 80

STARTING FUEL DELIVERY

Rated speed rpm : 100 : 20.25 rack travel mm : + 0.75Tolerance mm

Del. quantity

cm3/1000 strokes : 93.5

Tolerance

cm3/1000 strokes : +- 8.0

Check tolerance

: + 11.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 325

7.50 Rack travel in mm : : **←** 0.10 Tolerance mm Del. quantity

cm3/1000 strokes :

12.0

Tolerance

cm3/1000 strokes : → 3.0

Check tolerance

: +- 4.5 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 2.0

Check tolerance

cm3/1000s. 3.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 27.06.98 : ISO 4113

Combination No. : 0 400 866 227

Injection pump

Pump designation : PES6A95D410/3RS2907

EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A5C870L

Governer no. : 0 420 232 625

Cust. part No. : 0423 1964 KY

Customer-spec. information

Customer : KHD-DMI
Motor : BF6L 913

Power KW

: 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

B12

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.00

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 82.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed	+ Tolerance + cm3/1000 strokes : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Chist todo strokes . 3.3	+ um3/10005 8.0
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
	t control lever
Rated speed rpm : 325	position degree : 103.0
5 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	tolerance degree : +- 4.0
Rack travel in mm: 9.60	1 00550
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity	rack travel mm : 12.00
cm3/1000 strokes : 14.5	+ Rated speed rpm : 1295
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	7 00
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1355
cm3/1000s. : +- 4.5 Spreed	+ Rated speed rpm : 1355 + Tolerance 1/min : +- 15
Tolerance	
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 9.0	+ Rated speed rpm : 1565
	- Haroa opeca i piii
	+ rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1415
WITH GOVERNOR	+ Tolerance 1/min : +- 15
	+
	†
CITUE SI EEVE POSTITION	<u> </u>
GUIDE SLEEVE POSITION	+ LOW TOLE
GUIDE SLEEVE POSITION	LOW IDLE
GUIDE SLEEVE POSITION control lever	LOW IDLE
	LOW IDLE control lever
control lever	control lever position degree : 70.0
control lever position degree : FREE Rated speed rpm : 300	- control lever
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50	control lever position degree : 70.0 tolerance degree : +- 4.0
control lever position degree : FREE Rated speed rpm : 300	control lever position degree : 70.0
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10
control lever position degree : FREE Rated speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing:
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 600
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 600
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : +- 30
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : +- 30
control lever position degree : FREE Reted speed rpm : 300 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : +- 30

Tolerance mm	: +- 0.05		
Rated speed rpm rack travel mm Tolerance mm			
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.05 : + 0.10		
ANEROID/ALTITUDE COMPENSATOR TEST			
SETTING			
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000		
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 13.50 : + 0.10		
MEASUREMENT			
Rated speed rpm	: 500		
Pressure hPa rack travel mm Tolerance mm	: 250 : 13.80 : + 0.05		
FUEL DELIVERY CHARACTERISTICS			
Aneroid pressure hPa Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 750 : 14.05 : + 0.10 : 85.0 : + 2.0 : + 4.0		
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes			

: +-	- 3.0	
 IVERY	,	
: : +-	100 20.50 1.00	
:	120.0	
: +	- 7.5	
: +-	- 10.0	
:	325	
: +-	9.60 - 0.10	
:	14.5	
: +-	- 2.0	
: +-	4.5	
:	5.5	
	:: +-	: 100 : 20.50 : + 1.00 : 120.0 : + 7.5 : + 10.0 : 325 : + 9.60 : + 0.10 : 14.5 : + 2.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 27.06.98 : ISO 4113

Combination No. : 0 400 866 229

Injection pump

Pump designation : PES6A95D410/3RS2907

EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A5C873L

Governer no. : 0 420 232 628

Cust. part No. : 0423 2077 KY

Customer-spec. information

Customer : KHD-DMI

Motor

: BF6L 913

Power KW

: 118.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : ← 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

B15

x inside diameter : 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : - 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: ← 0.50

Check

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 13.00

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes : 82.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: +- 3.0

Spreed	† Tolerance
Tolonomo	cm3/1000 strokes : 3.5
Tolerance - cm3/1000 strokes : 3.5 -	+ Check tolerance + cm3/1000S. : 8.0
CIID/ 1000 Strokes . 5.5	T (11137 15003 3.0
Check tolerance	1
cm3/1000s. : 8.0 -	
	CONTROL LEVER
-	†
Rated speed rpm : 325 -	control lever
Rated speed rpm : 325 -	position degree : 103.0 tolerance degree : +- 4.0
Rack travel in mm: 9.60	toterance degree . 1 4.0
Tolerance mm : + 0.10	RATED SPEED
Del. quantity -	rack travel mm : 12.00
cm3/1000 strokes : 14.5 -	Rated speed rpm : 1295
Tolerance -	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0 - Check tolerance -	† + rack travel mm : 4.00
cm3/1000S. : +- 4.5	Rated speed rpm : 1355
Spreed -	Tolerance 1/min : + 15
Tolerance -	+
cm3/1000 strokes : 5.5 -	rack traviel mm : 0.85
Check tolerance -	Tolerance mm : + 0.55
cm3/1000s. : 9.0 -	Rated speed rpm : 1565
· ·	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1415
WITH GOVERNOR -	Tolerance 1/min : + 15
-	_
-	+
CULTED OF COURT DOCUMENTS	+
GUIDE SLEEVE POSITION -	LOW TRIE
GUIDE SLEEVE POSITION	LOW IDLE
- -	LOW IDLE
GUIDE SLEEVE POSITION control lever position degree : FREE	LOW IDLE
control lever	control lever position degree : 70.0
control lever - position degree : FREE - Rated speed rpm : 800 -	control lever
control lever - position degree : FREE - Rated speed rpm : 800 - Rack travel in mm : 0.50 -	control lever position degree : 70.0 tolerance degree : +- 4.0
control lever - position degree : FREE - Rated speed rpm : 800 -	control lever position degree : 70.0
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring
control lever - position degree : FREE - Rated speed rpm : 800 - Rack travel in mm : 0.50 -	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 - Rack travel in mm : 0.50 Tolerance mm : + 0.20	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : +- 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 3.25	control lever position degree : 70.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel rmm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 600
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 600
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 600
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel rmm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : + 30
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 82.5 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	control lever position degree : 70.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 9.10 Tolerance mm : + 0.10 Testing: Rated speed rpm : 325 rack travel mm : 9.60 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 600 Tolerance 1/min : + 30

Tolerance mm	: 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 14.10 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.05 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1000
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : − : 13.50 : ← 0.10
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 250 : 13.80 : + 0.05
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 750 : 14.05 : + 0.10 : 85.0 : + 2.0 : + 4.0
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	: 69.5
Tolerance cm3/1000 strokes	: +- 1.0

Check tolerance cm3/1000s.	: +- 3.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOU TOUT	\
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm Del. quantity	: +- 0.10
cm3/1000 strokes Tolerance	: 14.5
cm3/1000 strokes	: 2.0
Check tolerance cm3/1000s. Spreed	: +- 4.5
Tolerance cm3/1000 strokes Check tolerance	: 5.5
cm3/1000s.	: 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.06.98 : ISO 4113

Combination No. : 0 402 076 823

Injection pump

Pump designation : PES6P120A720RS3352

EP type number : 0 412 026 780

Governor

Governer design. : RSV400...1100P2A599

: -10

Governer no. : 0 421 833 620

Cust. part No. : RE502438

Customer—spec. information Customer : DEERE

Motor

: 6081AF001

Power KW : 149.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

B18

x inside diameter : x Length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

*NW after s.o.d. : 6.50

Tolerance : +- 0.50

Check

: +- 0.75 tolerance °NW

Barrel no. : 1

Beginning of delivery differende

and maximum rack

14.00

Difference °CS : 2.50

BASIC SETTING

Rated speed rpm : 1100

D 1 4 5 5 5	
Rack travel in mm: 11.55 + Tolerance mm: + 0.05 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 133.0	Rated speed rpm : 1100 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 900 Del. quantity cm3/1000 strokes : 133.0
Check tolerance cm3/1000s. : + 3.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000S. : +- 3.0 Spreed
Tolerance + cm3/1000 strokes : 4.0 +	Tolerance cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : 6.5	cm3/1000s. : 6.5
	CONTROL LEVER
Rated speed rpm : 400	control lever position degree : 97.0
Rack travel in mm: 5.70 + Tolerance mm: + 0.10 + Del. quantity	tolerance degree : +- 4.0 RATED SPEED
cm3/1000 strokes : 26.0 + Tolerance +	rack travel mm : 10.50 Rated speed rpm : 1160
cm3/1000 strokes : + 2.0 + Check tolerance + 4.5 + 4.5	Tolerance 1/min : +- 5 rack travel mm : 4.00
Spreed Tolerance	Rated speed rpm : 1215 Tolerance 1/min : +- 5
cm3/1000 strokes : 6.0 + Check tolerance cm3/1000s. : 8.0 + Check tolerance cm3/1000s.	rack travel mm : 0.85 Tolerance mm : +- 0.55
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1350 rack travel mm : 4.00
WITH GOVERNOR	Rated speed rpm : 1225 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	
control lever	LOW IDLE
position degree : -3 Rated speed rpm : 800	control lever position degree : 74.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : +- 4.0
governor spring + pre-tension +	Setting point w/out bumper spring Rated speed rpm : 400
click setting x : 4.50	rack travel mm : 5.20 Tolerance mm : + 0.10

Rated speed rpm		Aneroid pressure hPa : 900 Rated speed rpm : 700 Del. quantity
Testing: Rated speed rpm rack travel mm Tolerance mm	: 400 : 5.70 : +- 0.10	cm3/1000 strokes : 148.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.0
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm Rated speed rpm rack travel mm Tolerance mm	: 11.55 : ← 0.05 : 700 : 11.90 : ← 0.10	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strckes : 94.5 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.0
COMPENSATOR TEST		STARTING FUEL DELIVERY
SETTING Rated speed rpm Pressure hPa Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.50	Rated speed rpm : 100 rack travel mm : 21.00 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 105.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 25.0
MEASUREMENT Rated speed rpm	: 500	
Pressure hPa rack travel mm Tolerance mm Pressure hPa rack travel mm Tolerance mm Start interlock	: 575 : 11.20 : +- 0.20 : 360 : 10.40 : +- 0.05	LOW IDLE Rated speed rpm : 400 Rack travel in mm : 5.70 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 26.0 Tolerance cm3/1000 strokes : + 2.0 Check tolerance cm3/1000s. : + 4.5
Rated speed rpm Check speed 1/min	: > 100	Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 8.0
FUEL DELIVERY CHA	ARACTERISTICS	+

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.06.98 : ISO 4113

Combination No. : 0 402 076 824

Injection pump

Pump designation : PES6P120A720RS3352

EP type number : 0 412 026 780

Governor

Governer design. : RSV400...1100P2A599

: -11

Governer no. : 0 421 833 621

Cust. part No. : RE502439

Customer-spec. information Customer : DEERE

Motor

: 6081AF001

Power KW

: 149.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C

Tolerance °C

: ← 2.0

Overflow valve : 1 457 413 010

Inlet press. bar : 2.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance ma : **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Start of delivery blocking

"NW after s.o.d. : 6.50 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 14.00 2.50

Difference ° CS :

BASIC SETTING

Rated speed rpm : 1100

B22

- 1	+
Rack travel in mm : 11.55 Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 133.0	Rated speed rpm : 1100 Aneroid pressure
	+ hPa : 900
Tolerance cm3/1000 strokes : +- 1.0	+ Del. quantity + cm3/1000 strokes : 133.0 + Tolerance
Check tolerance cm3/1000s. : + 3.0	cm3/1000 strokes : + 1.0 Check tolerance
Spreed	+ cm3/1000S. : + 3.0 + Spreed + Tolerance
Tolerance cm3/1000 strokes : 4.0	cm3/1000 strokes : 4.0 Check tolerance
Check tolerance cm3/1000s. : 6.5	+ cm3/1000s. : 6.5
CIID/ 10003 0.3	
	CONTROL LEVER
Rated speed rpm : 400	+ control lever
Paula Annual de aus 5 70	position degree : 97.0
Rack travel in mm : 5.70 Tolerance mm : + 0.10	tolerance degree : + 4.0
Del. quantity	ARATED SPEED
cm3/1000 strokes : 26.0	rack travel mm : 10.50
Tolerance	Rated speed rpm : 1160
cm3/1000 strokes : +- 2.0	+ Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : +- 4.5	rack travel mm : 4.00
Spreed	Rated speed rpm : 1215
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : 6.0	†
Check tolerance	+ rack travel mm : 0.85
cm3/1000S. : 8.0	Tolerance mm : +- 0.55 Rated speed rpm : 1350
	+
(B) SETTING OF INJECTION PUMP	rack travel mm : 4.00
WITH GOVERNOR	+ Rated speed rpm : 1225 + Tolerance 1/min : +- 15
	T rocerance irmin : += 13
GUIDE SLEEVE POSITION	-
	LOUITNIE
control lever	+ LOW IDLE
position degree : - 3	<u></u>
Rated speed rpm : 800	control lever
,	position degree : 74.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : +- 4.0
covernor coring	Setting point w/out bumper spring
governor spring pre-tensi <i>o</i> n	Rated speed rpm : 400
click setting x : 4.50	rack travel mm : 5.20
-	Tolerance mm : +- 0.10
	+

Rated speed rpm	: 100	+ Aneroid pressure	: 900
CRT mm min.	: > 19.00	+ hPa + Rated speed rpm	: 700
Testing:		Del. quantity cm3/1000 strokes Tolerance	: 148.5
Rated speed rpm rack travel mm	: 400	cm3/1000 strokes	: +- 2.0
Tolerance mm	: 5.70 : +- 0.10	+ Check tolerance + cm3/1000s.	: +- 4.0
TORQUE CONTROL	1100	Aneroid pressure	
Rated speed rpm rack travel mm	: 11.55	+ hPa + Rated speed rpm	: 500
Tolerance mm	: +- 0.05	Del. quantity cm3/1000 strckes	
Rated speed rpm	: 700	† Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 11.90 : +- 0.10	+ cm3/1000 strokes + Check tolerance	: +- 2.0
rocci arios man	0.10	cm3/1000s.	: +- 4.0
ANEROID/ALTITUDE		‡	
COMPENSATOR TEST		STARTING FUEL DEL	IVERY
SETTING		+ Rated speed rpm	. 100
		+ rack travel nam	: 21.00
Rated speed rpm Pressure hPa	: 500 : 900	+ Tolerance mm + Del. quantity	: +- 0.50
		+ cm3/1000 strokes	: 105.0
Rated speed rpm Pressure hPa	: 500	Tolerance cm3/1000 strckes	· +- 20 0
rack travel mm	: 9.50	+ Check tolerance	
Tolerance mm	: + 0.25	$\frac{1}{1}$ cm3/1000s.	: +- 25.0
MEASUREMENT		1	
Rated speed rpm	: 500		
Pressure hPa	: 575	+ LOW IDLE	
rack travel mm	: 11.20	Rated speed rpm	: 400
Tolerance mm	: + 0.20	Rack travel in mm	: 5.70
Pressure hPa	: 360 : 10.40	Tolerance mm	: +- 0.10
rack travel mm Tolerance mm		+ Del. quantity + cm3/1000 strokes	: 26.0
		Tolerance	
Start interlock		cm3/1000 strokes Check tolerance	: +- 2.0
	. \ 400	- cm3/1000s.	: +- 4.5
Rated speed rpm	: > 100	+ Spreed + Tolerance	
Check	. > 90	+ cm3/1000 strokes	: 6.0
speed 1/min	: > 80	+ Check tolerance cm3/1000s.	: 8.0
FUEL DELIVERY CHA	DACTERISTICS	1	
TOEL DELIVERT CHA	WAC LEUT 3 LTC 2	I	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Test oil : 01.07.98

Combination No. : 0 402 046 791

Injection pump

Pump designation : PES6P120A320RS3139

EP type number : 0 412 026 718

Governor

Governer design. : RQV275...950PA728-4

Governer no. : 0 421 813 678

Cust. part No. :

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDR 063540 H

Power KW

: 264.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

40

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar

: +- 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : + 1.0

Prestroke mm : 3.55
Tolerance mm : + 0.05

Check

tolerance mm

: **←** 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order

: 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

"NW after s.o.d. : 9.00 Tolerance : \leftarrow 0.30

Check

tolerance °NW : +- 0.50

Barrel no.

: 1

Beginning of delivery differende

and maximum rack

travel

: 10.50

Tolerance mm : +- 0.50

CRT ZERO POSITION

Rack travel in mm : 13.35 Tolerance mm : +- 0.05	Rated speed rpm : 800 guide sleeve travel mm : 5.80 Tolerance mm : +- 0.20
BASIC SETTING	
Rated speed rpm : 600	Rated speed rpm : 450 guide sleeve travel mm : 3.50
Del. quantity cm3/1000 strokes : 213.0	Tolerance mm : + 0.20 Rated speed rpm : 1500
Tolerance cm3/1000 strokes : + 1.0	guide sleeve travel mm : 11.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : + 4.0	GUIDE SLEEVE POSITION
Spreed	GOIDE SEELVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1125
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 16.50 Tolerance mm : +- 1.30
Rated speed rpm : 275	CONTROL LEVER
Rack travel in mm: -7.50 Tolerance mm: + 0.10	control lever
Del. quantity	position degree : 122.0
cm3/1000 strokes : 26.0 + Tolerance	tolerance degree : +- 4.0
cm3/1000 strokes : +- 2.0 +- Check tolerance +-	RATED SPEED : -1.00
cm3/1000s. : +- 5.0	Rated speed rpm : 1020
Spreed Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : 8.0 + Check tolerance	rack travel mm : -9.30 Rated speed rpm : 1175
cm3/1000s. : 12.0	Tolerance 1/min : + 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : -12.85 Tolerance mm : + 0.55 Rated speed rpm : 1250
GUIDE SLEEVE TRAVEL	
Rated speed rpm : 950 + guide sleeve + -	LOW IDLE
travel mm : 6.80 + Tolerance mm : + 0.10 +	control lever
Rated speed rpm : 275	position degree : 69.0 tolerance degree : +- 4.0
guide sleeve travel mm : 1.50 Tolerance mm : +- 0.10	Setting point w/out bumper spring

Rated speed rpm	: 200	+
0.00	70	+ Ameroid pressure
CRT mm min.	: < -5.70	+ hPa : 1000
T		+ Rated speed rpm : 950
Testing:		+ Del. quantity
Dakad as and was	. 275	- cm3/1000 strokes : 213.0
Rated speed rpm rack travel mm Tolerance mm	: 275 : 750	+ Tolerance + cm3/1000 strokes : +- 3.0
Toloranae mm	7.JU	Check tolerance
rocer ance min	. +- 0.10	- cm3/1000s. : + 6.0
Rated speed rpm	• 350	1 0.0
idica speca (piii	. 330	
		Aneroid pressure
TORQUE CONTROL		+ hPa : -
Rated speed rpm	: 600	+ Rated speed rpm : 500
,		- Del. quantity
Rated speed rpm	: 950	+ cm3/1000 strokes : 119.0
Rated speed rpm Tolerance mm	: +- 0.10	† Tolerance
		+ cm3/1000 strokes : +- 1.0
		
ANEROID/ALTITUDE		+ cm3/1000s. : +- 4.0
OMPENSATOR TEST		†
		†
CITTAIC		CTARTING FUEL DELIVERY
SETTING		STARTING FUEL DELIVERY
atomic encode one	: 500	I Poted around non : 200
lated speed rpm Pressure hPa	: 1000	Rated speed rpm : 700
ressure nra	: 1000	+ Del. quantity + cm3/1000 strokes : 165.0
ated speed rpm	. 500	Tolerance
ressure hPa	: 500	+ cm3/1000 strokes : +- 15.0
ressure nra ack travel mm		Check tolerance
olerance mm		+ cm3/1000s. : +- 19.0
ocerance him	0.20	T CIID/10003 4- 17.0
EASUREMENT		}
		†
Rated speed rpm	: 500	
	440	+ LOW ICLE
Pressure hPa	: 660	†
ack travel mm	: -1.00	+ Rated speed rpm : 275
olerance mm	: +- 0.10	Book Americal description of 7 CO
Prescure Lr-	. 200	+ Rack travel in mm: -7.50
ressure hPa	: 200	Tolerance mm : +- 0.10
ack travel mm olerance mm		+ Del. quantity + cm3/1000 strokes : 26.0
oterance min	; - 0.03	Tolerance
tart interlock		
care intertock		+ check toterance $+$ cm3/1000s. $+$ 5.0
ated speed rpm	: > 100	+ Clis/10005. : + 3.0
ated speed rpm		Tolerance
aren sheen thu	. \ 170	- cm3/1000 strokes : 8.0
heck		+ Check tolerance
peed 1/min	: > 80	+ cm3/1000s. : 12.0
heck	. > 00	I (12.0
speed 1/min	: < 215	I
Poed Iviliti	. > [1]	1
UEL DELIVERY CHA	RACTERISTICS	+
	· · · · · · · · · · · · · · · · · · ·	+ End of test specification shee
		1 2 3 21 222 262 11 1000 1010

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.06.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 046 882

Injection pump

Pump designation : PES6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQV325...1250PA1385

Governer no. : 0 421 814 209

Cust. part No. : 1351707

Customer-spec. information Customer : DAF

: NS177M-CBP Motor Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Overflow quantity

140 min. L/h : 140 Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 12.80 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2

: - 4

Phasing : 0-60-120-180

: - 240- 300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.70

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.70

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

1	_
Rack travel in mm : 12.80 Tolerance mm : +- 0.05	Rated speed rpm : 520 guide sleeve travel mm : 3.02
Del. quantity cm3/1000 strokes : 154.5	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1510 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s. : +- 4.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1360
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 11.80 Tolerance mm : +- 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 4.40	Rated speed rpm : 1000
Tolerance mm : + 0.10	Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 26.0	Del. quantity
Tolerance	cm3/1000 strokes : 154.5
cm3/1000 strokes : +- 3.0 +	Tolerance
Check tolerance + 6.0 + 6.0 + 6.0	cm3/1000 strokes : +- 1.0
Spreed - 0.0	- Check tolerance - cm3/1000s. : +- 4.0
Tolerance +	Spreed
cm3/1000 strokes : 8.0	· Tolerance
Check tolerance	cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	Check tolerance
+	cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
+	position degree : 123.0
Rated speed rpm : 1303 +	tolerance degree : +- 4.0
guide sleeve	. DATEN COFFE
travel mm : 10.33 + Tolerance mm : + 0.15	RATED SPEED : 11.80
TOTAL	Rated speed rpm : 1290
Rated speed rpm : 325	Tolerance 1/min : +- 5
guide sleeve	Check
travel mm : 1.25	speed 1/min : +- 10
Tolerance mm : + 0.20	nack traval mm · / 00
Rated speed rpm : 865	rack travel mm : 4.00 Rated speed rpm : 1375
guide steeve	Tolerance 1/min : +- 15
travel mm : 5.43	Check
Tolerance mm : +- 0.25	speed 1/min : +- 20

C03

rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1500

LOW IDLE

control lever

position degree : 77.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 225

CRT mm min. : > 6.00

Testing:

Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : + 0.10

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 12.80 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1500
rack travel mm : 12.80
Tolerance mm : +- 0.10

Rated speed rpm : 600
Pressure hPa : rack travel mm : 7.10
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 210 rack travel mm : 8.60 Tolerance mm : + 0.10

Pressure hPa : 410 rack travel mm : 11.40 Tolerance mm : +- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 1000 Del. quantity

cm3/1000 strokes : 93.0 Tolerance

cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 4.40
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 26.0
Tolerance
cm3/1000 strokes : + 3.0

Check tolerance cm3/1000s. : +- 6.0 Spreed

Tolerance

cm3/10C0 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 30.06.98 : ISO 4113

Combination No. : 0 402 074 700

Injection pump

Pump designation : PES4P110B720RS3383

EP type number : 0 412 014 701

Governor

Governer design. : RSV300...1100P1A667

Governer no. : 0 421 833 582

Cust. part No. : 9882855

Customer spec. information

Customer : LIEBHERR

Motor : D 924 TI-E A2 Power KW : 137.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 049

1.5

Inlet press. bar : Tolerance bar : +- 0.1

Tolerance l/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 207.0 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-3-4-2

: ,0-90-180-270 Phasing

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance $^{\circ}NW$: + 0.75

Barrel no. : 4

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 12.10

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 173.0	- Aneroid pressure - hPa : 1220 - Del. quantity
Tolerance - cm3/1000 strokes : +- 1.0	- cm3/1000 strokes : 173.0 - Tolerance
Check tolerance	- cm3/1000 strokes : +- 1.0 - Check tolerance - cm3/1000s. : +- 3.5
Spreed	- Spreed - Tolerance
Tolerance	- cm3/1000 strokes : 4.0 - Check tolerance
cm3/1000 strokes : 4.0	- cm3/1000s. : 7.5
Check tolerance cm3/1000s. : 7.5	- CONTROL LEVER
	_
Rated speed rpm : 400	- control lever - position degree : 105.0
	tolerance degree : +- 4.0
Rack travel in mm : 4.35 + Tolerance mm : + 0.10 + Del. quantity	- RATED SPEED
cm3/1000 strokes : 27.0	- rack travel mm : 4.00
Tolerance + 3.0 + 3.0	- Rated speed rpm : 1080 - Tolerance 1/min : +- 15
Check tolerance	- Total ance 17 mm
cm3/1000s. : +- 5.5 Spreed	- ASSEMBLY GOVERNOR SETTING
Tolerance + cm3/1000 strokes : 4.5	- Rated speed rpm : 1028 - rack travel mm : 11.10
cm3/1000 strokes : 4.5 + Check tolerance	- rack travet nan : II.IU -
cm3/1000S. : 7.5	- Rated speed rpm : 1083 - Tolerance 1/min : +- 4
	- rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	•
	- Rated speed rpm : 1029 - rack travel mm : 11.10
GUIDE SLEEVE POSITION	- - Rated speed rpm : 1084
†	Tolerance 1/min : +- 4
control lever	- rack travel mm : 4.00
position degree : -3	
Rated speed rpm : 800	Rated speed rpm : 1030 rack travel mm : 11.10
Rack travel in mm: 0.50	rack travel mm : 11.10
Tolerance mm : + 0.20	Rated speed rpm : 1085
†	Tolerance 1/min : + 4
governor spring + pre-tension +	rack travel mm : 4.00
click setting x : 5.00	
+	Rated speed rpm : 1031
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 11.10
FULL LOAD DELIVER! AT FULL LOAD STOP	Rated speed rpm : 1086
Rated speed rpm : 980	Tolerance 1/min : +- 4
+	rack travel mm : 4.00

		1	
Pated speed rpm	· 1032	Rated speed rpm Pressure hPa rack travel mm Tolerance mm	500
Rated speed rpm rack travel mm	. 11 10	Proceure hPa	. 1220
rack travet min	. 11.10	T Fressule IIIa	. 1220
~ . .	4007	+ rack travel mm	12.10
Rated speed rpm	: 1087	† Tolerance mm	: +- 0.10
Tolerance 1/min	: ← 4	+	
rack travel mm	: 4.00	+ Rated speed rpm	: 500
		Pressure hPa rack travel mm Tolerance mm	: -
		I rack travel mm	10.90
Dated aroud non	. 1077	Toloronce mm	
Rated speed rpm rack travel mm	. 1000	T local ance into	. ' 0.10
rack travel mm	: 11.10	T	
		+ MEASUREMENT	
Rated speed rpm	: 1088	+	
Tolerance 1/min	: +- 4	+ Rated speed rpm	: 500
rack travel mm	: 4.00	+	
		+ Pressure hPa	: 730
 		Pressure hPa rack travel mm Tolerance mm	: 11.80
LOW IDLE		+ Tolerance mm	· +- 0.05
LOW IDEC		10001 41100 11111	. 0.03
		Pressure hPa	. 670
control lever		nock though mm	. 11 70
	70.0	+ rack travel mm	11.30
position degree	: 78.0	† Tolerance mm	: +- 0.10
tolerance degree	: +- 4.0	†	
		†	
Setting point w/o	ut bumper spring	+	· · · · · · · · · · · · · · · · · · ·
		+ FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 400	+	
rack travel mm	: 3.85		
Tolerance mm	: + 0.10	+ Aneroid pressure	
	,	+ hPa	: 1220
Testing:		+ Rated speed rpm	500
restring.		+ Del. quantity	. 500
5		+ cm3/1000 strokes	. 107 5
Rated speed rpm			: 193.5
rack travel mm	: 4.35	+ Tolerance	
Tolerance mm	: +- 0.10	+ cm3/1000 strokes	: +- 3.0
		+ Check tolerance	
rack travel mm Rated speed rpm	: 2.00	+ cm3/1000s.	: +- 6.0
Rated speed rpm	: 495	1	
Tolerance 1/min	: +- 50		·
Totel ance Thirm	30	+ Aneroid pressure	
		1	: 1220
TOROUT CONTROL		+ hPa	
TORQUE CONTROL	000	+ Rated speed rpm	: 700
Rated speed rpm	: 980	+ rack travel mm	: 12.10
rack travel mm	: 12.10	† Tolerance mm	: +- 0.10
Tolerance mm	: +- 0.05	+ Del. quantity	
		+ cm3/1000 strokes	: 186.5
Rated speed rpm	: 500	+ Tolerance	
rack travel mm	: 12.10	+ cm3/1000 strokes	: +- 3.0
Tolerance mm	: +- 0.10	+ Check tolerance	
roterance min	0.10	- cm3/1000s.	: +- 6.0
0-4-4	. 700	T (m) 10003.	. 1- 0.0
Rated speed rpm	: 700	Ť	
rack travel mm		†	
Tolerance mm	: 0.10	+ Aneroid pressure	
		+ hPa	: -
		Rated speed rpm	: 500
ANEROID/ALTITUDE		+ Del. quantity	
COMPENSATOR TEST		cm3/1000 strokes	: 170.0
COLUMNIA LEGI		Tolerance	. 110.0
		•	10
		+ cm3/1000 strokes	: +- 1.0

SETTING

Check tolerance

cm3/1000S.

: +- 3.5

STARTING FUEL DELIVERY

Rated speed rpm :

100

Del. quantity cm3/1000 strokes :

150.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s.

: +- 19.0

LOW IDLE

Rated speed rpm :

400

Rack travel in mm: 4.35

Tolerance mm

: + 0.10

Del. quantity

cm3/1000 strokes : 27.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s.

: +- 5.5

Spreed

Tolerance

cm3/1000 strokes :

4.5

Check tolerance

cm3/1000s.

7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 01.07.98 Test oil : ISO 4113

Combination No. : 0 402 074 7000

Injection pump

Pump designation : PES4P110B720RS3383 EP type number : 0 412 014 701

Governor

Governer design. : RSV300...1100P1A667

Governer no. : 0 421 833 582

Cust. part No. : 9882855

Customer-spec. information

Customer : LIEBHERR

Motor : D 924 TI-E A2

Power KW : 137.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 049

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Tolerance l/h: \leftarrow 10.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 207.0

Tolerance bar : ← 1.5

Test lines : 1 680 750 008

CD9

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.20 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing

: 0-90-180-270

Tolerance

: → 0.50

tolerance °NW

: **←** 0.75

Start of delivery mark

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

980

Rack travel in mm : 12.10

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 173.0

Tolerance

cm3/1000 strokes : +- 1.0

	† Check tolerance
Check tolerance	+ cm3/1000s. : +- 3.5
$cm3/1000s.$: \leftarrow 3.5	Spreed
	+ Tolerance
Spreed	+ cm3/1000 strokes : 4.0
9 F. CCG	+ Check tolerance
Tolerance	
cm3/1000 strokes : 4.0	† cm3/1000s. : 7.5
Chis/ 1000 5110Res . 4.0	Ť
Check tolerance	Ť
cm3/1000s. : 7.5	CONTROL LEVED
CIID7 (0003. : 7.5	+ CONTROL LEVER
	T control lavor
	t control lever
Pated aread are	position degree : 105.0
Rated speed rpm : 400	tolerance degree : +- 4.0
Rack travel in mm : 4.35	T DATES CONES
	+ RATED SPEED
Tolerance mm : + 0.10	
Del. quantity	rack travel mm : 4.00
cm3/1000 strokes : 27.0	+ Rated speed rpm : 1080
Tolerance	+ Tolerance 1/min : + 15
cm3/1000 strokes : +- 3.0	†
Check tolerance	+ ASSEMBLY GOVERNOR SETTING
cm3/1000s. : +- 5.5	†
Spreed	+ Rated speed rpm : 1028
Tolerance	† rack travel mm : 11.10
cm3/1000 strokes : 4.5	+
Check tolerance	+ Rated speed rpm : 1083
cm3/1000s. : 7.5	+ Tolerance 1/min : +- 4
	+ rack travel mm : 4.00
	+
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	Rated speed rpm : 1029
	Rated speed rpm : 1029 rack travel mm : 11.10
	+ rack travel mm : 11.10
WITH GOVERNOR	rack travel mm : 11.10 Rated speed rpm : 1084
	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4
WITH GOVERNOR	rack travel mm : 11.10 Rated speed rpm : 1084
WITH GOVERNOR GUIDE SLEEVE POSITION	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4
GUIDE SLEEVE POSITION	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00
WITH: GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030
GUIDE SLEEVE POSITION	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00
WITH: GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : + 4 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 1031 rack travel mm : 11.10
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1036
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : +- 4
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1036
WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980 Aneroid pressure	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : +- 4
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980 Aneroid pressure hPa : 1220	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : +- 4 rack travel mm : 4.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980 Aneroid pressure hPa : 1220 Del. quantity	Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1086 Tolerance 1/min : +- 4 rack travel mm : 4.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980 Aneroid pressure hPa : 1220 Del. quantity cm3/1000 strokes : 173.0	rack travel mm : 11.10 Rated speed rpm : 1084 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : +- 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : +- 4 rack travel mm : 4.00
GUIDE SLEEVE POSITION control lever position degree : - 3 Rated speed rpm : 800 Rack travel in rmm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 5.00 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 980 Aneroid pressure hPa : 1220 Del. quantity	Rated speed rpm : 1084 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1030 rack travel mm : 11.10 Rated speed rpm : 1085 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1031 rack travel mm : 11.10 Rated speed rpm : 1086 Tolerance 1/min : + 4 rack travel mm : 4.00 Rated speed rpm : 1086 Tolerance 1/min : + 4 rack travel mm : 4.00

Tolerance 1/min : +- 4 rack travel mm : 4.00	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 10.90 Tolerance mm : + 0.10
Rated speed rpm : 1033	+ Tolerance mm : + 0.10
Rated speed rpm : 1033 rack travel mm : 11.10	+ MEASUREMENT
Rated speed rpm : 1088 Tolerance 1/min : +- 4	Patrol and any E00
rack travel mm : 4.00	+ Rated speed rpm : 500
Table travel time . 4.00	Pressure hPa : 730
	+ rack travel mm : 11.80
LOW IDLE	+ Tolerance mm : + 0.05
control lever	Pressure hPa : 670 rack travel mm : 11.30 Tolerance mm : + 0.10
position degree : 78.0	Tolerance mm : + 0.10
tolerance degree : + 4.0	Total arice inni
Setting point w/out bumper spring	‡
Dated speed specification (CC)	+ FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 400	I
rack travel mm : 3.85 Tolerance mm : + 0.10	Aneroid pressure
	+ hPa : 1220
Testing:	hPa : 1220 Rated speed rpm : 500
Dutad an ad son 100	+ Del. quantity + cm3/1000 strokes : 193.5
Rated speed rpm : 400	+ cm3/1000 strokes : 193.5 + Tolerance
rack travel mm : 4.35 Tolerance mm : + 0.10	+ cm3/1000 strokes : +- 3.0
Total and then	Check tolerance
rack travel mm : 2.00	+ cm3/1000s. : + 6.0
rack travel mm : 2.00 Rated speed rpm : 495 Tolerance 1/min : +- 50	+
Tolerance 1/min : +- 50	Ananaid massum
	+ Aneroid pressure + hPa : 1220
TORQUE CONTROL	hPa : 1220 Rated speed rpm : 700 rack travel mm : 12.10 Tolerance mm : + 0.10
Rated speed rpm : 980	rack travel mm : 12.10
rack travel mm : 12.10	+ Tolerance mm : +- 0.10
Tolerance mm : +- 0.05	+ Del. quantity
Rated speed rpm : 500	+ cm3/1000 strokes : 186.5 + Tolerance
rack travel mm : 12.10	cm3/1000 strokes : +- 3.0
rack travel mm : 12.10 Tolerance mn : + 0.10	+ Check tolerance
	+ cm3/1000s. : $+$ 6.0
Rated speed rpm : 700	†
rack travel mm : 12.10 Tolerance mm : + 0.10	Annual de management
roterance min : += 0.10	+ Aneroid pressure + hPa : -
	Rated speed rpm : 500
ANEROID/ALTITUDE	+ Del. quantity
COMPENSATOR TEST	+ cm3/1000 strokes : 170.0
	+ Tolerance
SETTING	+ cm3/1000 strokes : +- 1.0
SETTING	+ Check tolerance + cm3/1000s. : +- 3.5
Rated speed rpm : 500	- CIIIJ/ 10003
Pressure hPa : 1220	+
rack travel mm : 12.10	+
Tolerance mm : +- 0.10	+ STARTING FUEL DELIVERY

Rated speed rpm : 100
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 400 Rack travel in mm: 4.35 : **←** 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 27.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : **←** 5.5 Spreed Tolerance cm3/1000 strokes : 4.5 Check tolerance cm3/1000s. : 7.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.06.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 646 667

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278K

Governer no. : 0 421 815 509

Cust. part No. : 1310221/1

Customer-spec. information

Customer : DAF : XF 315 M Motor

Power KW : 315.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. l/h : 140 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 : +- 1.5 Tolerance bar

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

: **←** 0.75 tolerance °NW

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 13.40 Tolerance mm : + 0.05

		+ guide sleeve
Del. quantity cm3/1000 strokes	: 318.0	travel mm : 3.92 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes	: + 1.0	† Rated speed rpm : 1310 guide sleeve
Check tolerance cm3/1000S.	: + 4.0	travel mm : 13.50 Tolerance mm : +- 0.50
Spreed		GUIDE SLEEVE POSITION
•		+ GOIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 5.0	+ control lever - position degree : - 1
Check tolerance cm3/1000S.	: 9.0	Rated speed rpm : 1158
		+ Rack travel in mm : 12.00 + Tolerance mm : +- 2.70
Rated speed rpm	: 275	
Rack travel in mm	: 5.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm	: + 0.10	Rated speed rpm : 980
Del. quantity cm3/1000 strokes	: 13.5	+ Aneroid pressure + hPa : 1500
Tolerance		- Del. quantity
cm3/1000 strokes	: ← 3.0	+ cm3/1000 strokes : 318.0
Check tolerance cm3/1000s.	: +- 6.0	+ Tolerance + cm3/1000 strokes : +- 1.0
Spreed		+ Check tolerance
Tolerance cm3/1000 strokes	: 8.0	+ cm3/1000s. : +- 4.0
Check tolerance	. 6.0	+ Spreed + Tolerance
cm3/1000s.	: 12.0	cm3/1000 strokes : 5.0 Check tolerance
(B) SETTING OF IN	JECTION PUMP	+ cm3/1000s. : 9.0
		CONTROL LEVER
GUIDE SLEEVE TRAV	EL	- control lever
Rated speed rpm	: 1077	position degree : 119.0
guide sleeve	. 40.2/	tolerance degree : +- 4.0
travel mm Tolerance mm	: 10.24 : +- 0.15	T RATED SPEED
		† rack travel mm : 12.40
Rated speed rpm guide sleeve	: 275	+ Rated speed rpm : 1040 + Tolerance 1/min : +- 5
travel mm	: 2.04	+ Check
Tolerance mm	: + 0.20	speed 1/min : +- 10
Rated speed rpm guide sleeve	: 704	rack travel mm : 4.00 Rated speed rpm : 1145
travel mm	: 6.53	+ Tolerance 1/min : +- 15
Tolerance mm	: + 0.25	+ Check + speed 1/min : +- 20
Rated speed rpm	: 400	rack travel mm : 0.50

Tolerance mm Rated speed rpm	: +- 0.50 : 1275
LOW IDLE	
control lever position degree tolerance degree	: 72.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 8.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.20 : + 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 13.40 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	: 13.35 : +- 0.05
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.55 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.05 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 13.40 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 980 : 13.80 : +- 0.10

ANEROID/ALT]	TUDE
COMPENSATOR	TEST

SETTING

Rated speed rpm	:	980
Pressure hPa	:	1500
rack travel mm	:	13.40
Tolerance mm	: +	- 0.05
Rated speed rpm	:	980
Pressure hPa	:	-
rack travel mm	:	8.55
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated speed rpm	:	980
Pressure hPa	:	520
rack travel mm	:	12.20
Tolerance mm	: +	- 0.05
Pressure hPa	:	210
rack travel mm	:	9.80
Tolerance mm	: +	- 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa Rated speed rpm	: 1500 : 750		
Del. quantity cm3/1000 strokes Tolerance	: 342.0		
cm3/1000 strokes Check tolerance	: +- 2.0		
cm3/1000s. Spreed	: +- 5.0		
Tolerance cm3/1000 strokes Check tolerance	: 8.0		
cm3/1000s.	: 12.0		
rack travel mm Tolerance mm	: 13.05 : + 0.10		
Aneroid pressure hPa Rated speed rpm	: - : 600		
Del. quantity cm3/1000 strokes	: 195.0		

cm3/1000 strokes	: +-	1.0
Check tolerance cm3/1000s.	: +-	4.0
Spreed Tolerance		
cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

LOW IDLE

Rated speed rpm	:	275	
Rack travel in mm Tolerance mm Del. quantity	: : +-	5.20 - 0.10	
cm3/1000 strokes	:	13.5	
Tolerance cm3/1000 strokes	: +-	3.0	
Check tolerance cm3/1000s.	: +-	- 6.0	
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 26.06.98 Edition : 26.06.98 Test oil : ISO 4113

Combination No. : 0 402 646 668

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278

· : -1K

Governer no. : 0 421 815 510

Cust. part No. : 1310220/1

Customer-spec. information Customer : DAF

Motor Power KW : 280.0

: XF 280 M

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

: 40 temp. °C Tolerance °C

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 145 Tolerance l/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45
Tolerance mm : +- 0.05 Check tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm: +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 12.60

C17

Tolerance mm	: + 0.05	guide sleeve travel mm : 3.92
Del. quantity cm3/1000 strokes	: 303.0	Tolerance mm : +- 0.25 Rated speed rpm : 1310
Tolerance cm3/1000 strokes	: + 1.0	Rated speed rpm : 1310 guide sleeve travel mm : 13.50 Tolerance mm : +- 0.50
Check tolerance cm3/1000s.	: + 4.0	
Spreed	<u> </u>	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1171
Check tolerance cm3/1000s.	: 9.0	Rack travel in mm : 10.70 Tolerance mm : +- 2.00
Rated speed rpm	: 275	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity		Rated speed rpm : 750 Aneroid pressure hPa : 1500
cm3/1000 strokes Tolerance cm3/1000 strokes	+	Del. quantity cm3/1000 strokes : 303.0 Tolerance
Check tolerance cm3/1000s.	: +- 6.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes	: 8.0	Spreed Tolerance
Check tolerance cm3/1000s.	: 12.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
(B) SETTING OF IN- WITH GOVERNOR	JECTION PUMP	
		CONTROL LEVER
GUIDE SLEEVE TRAV	+	control lever position degree : 118.0
Rated speed rpm guide sleeve	+	tolerance degree : +- 4.0
travel mm Tolerance mm	: 10.04 : \(\phi\) 0.15	RATED SPEED rack travel mm : 11.35 Rated speed rpm : 1050
Rated speed rpm guide sleeve	+	Tolerance 1/min : +- 5 Check
travel mm Tolerance mm	: 2.04 : + 0.20	speed 1/min : +- 10 rack travel mm : 4.00
Rated speed rpm guide sleeve	+	Rated speed rpm : 1150 Tolerance 1/min : +- 15
travel mm Tolerance mm	: 6.48 : + 0.25	Check speed 1/min : +- 20
Rated speed rpm	: 400	rack travel mm : 0.50

Tolerance mm Rated speed rpm		Rated speed rpm Pressure hPa rack travel mm Tolerance mm
LOW IDLE		Rated speed rpm Pressure hPa rack travel mm Tolerance mm
control lever position degree tolerance degree	: 71.0 : + 4.0	MEASUREMENT
		Rated speed rpm
Setting point w/o		Pressure hPa
Rated speed rpm	: 175	+ rack travel mm + Tolerance mm
CRT mm min.	: > 7.80	+ Pressure hPa
Testing:		rack travel mm Tolerance mm
Rated speed rpm rack travel mm	: 5.20	+ Poterance man
Tolerance mm	: +- 0.10	FUEL DELIVERY CHAP
Rated speed rpm	: 300	TOLE DELIVERY WITH
TOPOLIE CONTROL		Aneroid pressure
TORQUE CONTROL Rated speed rpm	• 750	Rated speed rpm
rack travel mm		Del. quantity
Tolerance mm		cm3/1000 strokes Tolerance
Rated speed rpm	• 980	+ cm3/1000 strokes
rack travel mm	. 12 35	Check tolerance
Tolerance mm	: + 0.10	- cm3/1000s.
roter ance han	0.10	Spreed
Rated speed rpm	• 900	Tolerance
rack travel mm	: 12.60	cm3/1000 strokes
Tolerance mm	: + 0.10	- Check tolerance
		cm3/1000s.
Rated speed rpm rack travel mm	: 700 : 12.30	<u> </u>
Toterance mm	: 12.30 : + 0.10	rack travel mm
		Tolerance mm
Rated speed rpm	: 600	+
rack travel mm	: 11.80	†
Tolerance mm	: ← 0.10	+ Aneroid pressure + hPa
Rated speed rpm	: 500	+ Rated speed rpm
rack travel mm	: 11.40	+ Del. quantity
Tolerance mm	: +- 0.10	+ cm3/1000 strokes
		+ Tolerance
ANICOAN / A TTTIC		cm3/1000 strokes
ANEROID/ALTITUDE		Check tolerance
COMPENSATOR TEST		- cm3/1000s.
		+ Spreed + Tolerance
		cm3/1000 strokes
SETTING		

Rated speed rpm Pressure hPa	: 775 : 1500
rack travel mm Tolerance mm	: 12.65 : + 0.05
Rated speed rpm	: 775
Pressure hPa rack travel mm	: - : 8.50
Tolerance mm MEASUREMENT	: +- 0.20
	776
Rated speed rpm	: 775
Pressure hPa rack travel mm Tolerance mm	: 450 : 12.10 : ← 0.05
Pressure hPa	: 170 : 9.90
rack travel mm Tolerance mm	: 9.90 : ← 0.10
FIEL DELTHERY CHA	DACTEDIOTICO
FUEL DELIVERY CHA	KACIEKISIICS
Aneroid pressure	
hPa Rated speed rpm	: 1500 : 980
Del. quantity	
cm3/1000 strokes Tolerance	: 272.0
cm3/1000 strokes Check tolerance	: +- 2.0
cm3/1000s.	: +- 5.0
Spreed Tolerance	
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
rack travel mm	: 12.60
Tolerance mm	: + 0.10
Aneroid pressure	
hPa	: -
Rated speed rpm Del. quantity	: 600
cm3/1000 strokes Tolerance	: 184.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed Tolerance	
cm3/1000 strokes	: 8.0

Check tolerance cm3/1000s. : 12.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 5.20 Tolerance mm : ← 0.10 Del. quantity cm3/1000 strokes : 13.5 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s.: +- 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0 Check tolerance

cm3/1000s.: 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.06.98 Edition Test oil : 20.00.98

Combination No. : 0 402 646 673

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1300K

Governer ro. : 0 421 815 527

Cust. part No. : 1315099

Customer-spec. information Customer : DAF Motor : XF 250 M Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test cil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. l/h : 150 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : ← 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

	1
Rack travel in mm : 11.85 Tolerance mm : + 0.05	Rated speed rpm : 400 guide sleeve
N-1	travel mm : 3.92
Del. quantity cm3/1000 strokes : 283.0	Tolerance mm : +- 0.25
	+ Rated sp ee d rpm : 1310
Tolerance	+ guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 13.50
	+ Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 4.0	
	+ GUIDE SLEEVE POSITION
Spreed	+
*-1	†
Tolerance	+ control lever
cm3/1000 strokes : 5.0	position degree : - 1
	+ Rated speed rpm : 1181
Check tolerance	+
cm3/1000s. : 9.0	A Rack travel in mm : 10.00
	+ Tolerance mm : +- 2.00
	1 Total direction
Dated around nom . 275	FIRE LOAD DELTHERY AT THE LOAD STOR
Rated speed rpm : 275	+ FULL LOAD DELIVERY AT FULL LOAD STOP
	†
Rack travel in mm : 5.20	+ Rated speed rpm : 750
Tolerance mm : + 0.10	Ameroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 13.5	Del. quantity
Tolerance	+ cm3/1000 strokes : 283.0
cm3/1000 strokes : +- 3.0	+ Tolerance
Check tolerance	- cm3/1000 strokes : + 1.0
cm3/1000s. : +- 6.0	- Check tolerance
Spreed	+ cm3/1000S. : $+$ 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 8.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR	
HITTI GOVERNON	CONTROL LEVER
	T CONTROL LEVER
GUIDE SLEEVE TRAVEL	T control laves
GOIDE STEENE LYNNET	+ control lever
Oaks discount and 4030	position degree : 118.0
Rated speed rpm : 1072	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 10.16	+ RATED SPEED
Tolerance mm : +- 0.15	+ rack travel mm : 10.50
	+ Rated speed rpm : 1045
Rated speed rpm : 275	+ Tolerance 1/min : +- 5
guide sleeve	+ Check
travel mm : 2.04	+ speed 1/min : +- 10
Tolerance mm : +- 0.20	1 Specu (/ mill) , 12 10
roter arite limil : TO 0.20	T mosk through the control of the co
Data di anagadi may 704	+ rack travel mm : 4.00
Rated speed rpm : 701	+ Rated speed rpm : 1140
guide sleeve	+ Tolerance 1/min : +- 15
travel mm : 6.52	+ Check
Tolerance mm : + 0.25	+ speed 1/min : +- 20
	, .

rack travel mm Tolerance mm Rated speed rpm	: 0.70 : + 0.70 : 1275
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : +- 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 7.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 5.20 : + 0.10
Rated speed rpm	: 310
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 980 : 11.35 : +- 0.10
Rated speed rpm rack travel mm Tolerance mm	: 900 : 11.50 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.75 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 11.20 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.80 : + 0.10

SETTING

Rated speed rpm	: 775
Pressure hPa	: 1500
rack travel mm	: 11.85
Tolerance mm	: +- 0.05
Rated speed rpm	: 775
Pressure hPa	: -
rack travel mm	: 8.30
Tolerance mm	: +- 0.20
MEASUREMENT	
Rated speed rpm	: 775
Pressure hPa	: 460
rack travel mm	: 11.00
Tolerance mm	: +- 0.05
Pressure hPa	: 250
rack travel mm	: 9.30
Tolerance mm	: ← 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure	: 1500
Rated speed rpm	: 7500 : 980
Del. quantity cm3/1000 strokes Tolerance	: 245.0
cm3/1000 strokes	: +- 2.0
Check tolerance cm3/1000s. Spreed Tolerance	: +- 5.0
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
rack travel mm Tolerance mm	: 11.50 : + 0.10
Aneroid pressure hPa Rated speed rpm	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: + 0.10
Aneroid pressure hPa Rated speed rpm Del. quantity	: + 0.10 : - : 600

LOW IDLE

Rated speed rpm	:	275	
		5.20 0.10	
Del. quantity cm3/1000 strokes Tolerance	:	13.5	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s. Spreed	: +-	5.0	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26,06,98 : ISO 4113

Combination No. : 0 402 646 681

Injection pump

Pump designation : PE6P120A320RS7412

EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1381K

Governer no. : 0 421 815 561

Cust. part No. : 1349846/0

Customer-spec. information

Customer : DAF

Motor

: XF 250

Power KW

: 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 2.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Rack travel in mm : 11.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-: 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

· +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

Tolerance

: ← 0.10

Check

tolerance °NW

: +- 0.70

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm : 11.35

Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 245.0

	+ Rated speed rpm : 1282
Tolerance	+ guide sleeve
cm3/1000 strokes : + 1.0	+ travel mm : 12.00
	+ Tolerance mm : +- 0.25
Check tolerance	+
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1370
	guide sleeve
Spreed	+ travel mm : 13.50
-p	+ Tolerance mm : + 0.50
Tolerance	1
cm3/1000 strokes : 5.0	
	+ GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 9.0	Rated speed rpm : 1263
	Rack travel in mm: 10.50
	+ Tolerance mm : +- 1.30
Rated speed rpm : 275	1
•	<u> </u>
Rack travel in mm : 5.20	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.10	+
Del. quantity	+ Rated speed rpm : 980
cm3/1000 strokes : 13.5	+ Aneroid pressure
Tolerance	+ hPa : 1500
cm3/1000 strokes : +- 3.0	+ Del. quantity
Check tolerance	+ cm3/1000 strokes : 245.0
cm3/1000s. : $+-$ 6.0	+ Tolerance
Spreed	+ cm3/1000 strokes : +- 1.0
Tolerance	+ Check tolerance
cm3/1000 strokes : 8.0	+ cm3/1000s. : +- 4.0
Check tolerance	+ Spreed
cm3/1000s. : 12.0	+ Tolerance
	+ cm3/1000 strokes : 5.0
	+ Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	†
	†
GUIDE SLEEVE TRAVEL	CONTROL LEVER
GOINE SEEEAE LIMAGE	T CONTROL LEVER
Rated speed rpm : 1055	+ control lever
guide sleeve	position degree : 110.0
travel mm : 7.47	+ tolerance degree : +- 4.0
Tolerance mm : + 0.15	+
	+ RATED SPEED
Rated speed rpm : 275	+ rack travel mm : 10.50
guide sleeve	+ Rated speed rpm : 1045
travel mm : 2.04	+ Tolerance 1/min : +- 5
Tolerance mm : +- 0.20	† Check
	+ speed 1/min : +- 10
Rated speed rpm : 820	+
guide sleeve	+ rack travel mm : 4.00
travel mm : 5.14	+ Rated speed rpm : 1130
Tolerance mm : +- 0.25	+ Tolerance 1/min : + 15
	+ Check
Rated speed rpm : 480	+ speed 1/min : + 20
guide sleeve	†
travel mm : 3.34	+ rack travel mm : 0.70
Tolerance mm : \leftarrow 0.25	+ Tolerance mm : +- 0.70
	+ Rated speed rpm : 1275

LOW IDLE control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 175 CRT mm min. :> 8.30 Testing: Rated speed rpm : 275 rack travel mm : 5.20 : **←** 0.10 Tolerance mm Rated speed rpm : 300 TURQUE CONTROL Rated speed rpm : 980 rack travel mm : 11.35 Tolerance mm : +- 0.10 Rated speed rpm : 900 rack travel mm : 11.50 : **←** 0.10 Tolerance mm Rated speed rpm : 750 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.75 : +- 0.10 Tolerance mm Rated speed rpm : 600 rack travel mm : 11.30 : + 0.10 Tolerance mm Rated speed rpm : 500 rack travel mm : 10.90 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING

rack travel mm	: 11.85
Tolerance mm	: ← 0.10
Rated speed rpm	: 775
Pressure hPa	: 460
rack travel mm	: 11.00
Tolerance mm	: +- 0.05
MEASUREMENT	
Rated speed rpm	: 775
Pressure hPa	: -
rack travel mm	: 8.30
Tolerance mm	: + 0.20
Pressure hPa	: 250
rack travel mm	: 9.30
Tolerance mm	: +- 0.10

FUEL DELIVERY CHARACTERISTICS

	
Aneroid pressure	
hPa	1500
Rated speed rpm	: 750
rack travel mm	: 11.85
Tolerance mm Del. quantity	: +- 0.05
cm3/1000 strokes	: 283.0
Tolerance	. 205.0
cm3/1000 strokes	: + 2.0
Check tolerance	
cm3/1000s.	: +- 6.0
Spreed	
Tolerance cm3/1000 strokes	: 10.0
Check tolerance	. 10.0
cm3/1000s.	: 15.0
Aneroid pressure	
hPa	: -
hPa Rated speed rpm	: -
hPa Rated speed rpm Del. quantity	: - : 600
hPa Rated speed rpm Del. quantity cm3/1000 strokes	: -
hPa Rated speed rpm Del. quantity	: - : 600
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: - : 600 : 188.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 600 : 188.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed	: - : 600 : 188.0 : + 1.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: - : 600 : 188.0 : + 1.0 : + 4.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes	: - : 600 : 188.0 : + 1.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance	: - : 600 : 188.0 : + 1.0 : + 4.0

Rated speed rpm : 775 Pressure hPa : 1500

LOW IDLE

Rated speed rpm	:		275	
Rack travel in mm Tolerance mm	:	+-	5.20 0.10	
Del. quantity cm3/1000 strokes Tolerance	:		13.5	
cm3/1000 strokes Check tolerance	:	+-	3.0	
cm3/1000s.	:	+-	6.0	
Tolerance cm3/1000 strokes	:		8.0	
Check tolerance cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 30.06.98 Edition : 30.06.98
Test oil : ISO 4113

Combination No. : 0 402 746 650

Injection bumb

Pump designation : PES6P120A320RS7344

EP type number : 0 412 726 914

Governor

Governer design. : RQ275/1050PA999-6

Governer no. : 0 421 801 785

Cust. part No. : CCEP 5151A 66-230

Customer-spec. information

Customer : RENAULT V.I.
Motor : MIDR 062045 M41

Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 145 Tolerance l/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

D01

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50Tolerance mm : $\leftarrow 0.05$

Check

tolerance mm : + 0.10

Rack travel in mm : 11.00

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

"NW after s.o.d. : -0.15

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel Difference ° CS : 2.25

11.00

	1
	Rated speed rpm : 275
	+ quide sleeve
CRT ZERO POSITION	+ travel mm : 0.80
	+ Tolerance mm : +- 0.10
	+
Rack travel in mm : 11.60	+ Rated speed rpm : 1050
Tolerance mm : +- 0.05	+ guide sleeve
	+ travel mm : 6.00
	+ Tolerance mm : ← 0.10
BASIC SETTING	+
	+ Rated speed rpm : 396
Rated speed rpm : 600	† guide sleeve
	_ + travel mm : 2.99
Del. quantity	+ Tolerance rm : +- C.10
cm3/1000 strokes : 287.0	+
	_ + Rated speed rpm : 550
Tolerance	† guide sleeve
cm3/1000 strokes : +- 1.0	† travel mm : 6.00
ngt aming replicat mangin kanggan mangin mangin mangin mangin tahun 1 danggan mangin mangin mangin mangin mang	+ Tolerance mm : +- 0.10
Check tolerance	+
cm3/1000s. : +- 4.0	+ Rated speed rpm : 1350
	_ + guide sleeve
Spreed	+ travel mm : 11.50
,	+ Tolerance mm : + 0.50
Tolerance	+
cm3/1000 strokes : 5.0	
	_ + GUIDE SLEEVE POSITION
Check tolerance	+
cm3/1000s. : 9.0	+
	_ + control lever
	+ position degree : 109
	+ Rated speed rpm : 600
Rated speed rpm : 275	+
	+ Rack travel in mm : 20.00
Rack travel in mm : -7.00	+ Tolerance mm : + 0.80
Tolerance mm : + 0.10	+
Del. quantity	
cm3/1000 strokes : 37.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+
cm3/1000 strokes : +- 2.0	+ Rated speed rpm : 600
Check tolerance	+ Anercid pressure
cm3/1000s. : +- 5.0	+ hPa : 1000
Spreed	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 287.0
cm3/1000 strokes : 8.0	† Tolerance
Check tolerance	+ cm3/1000 strokes : + 1.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000s. : +- 4.0
	+ Spreed
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : 5.0
	+ Check tolerance
	+ cm3/1000s. : 9.0
GUIDE SLEEVE TRAVEL	+
	+
Rated speed rpm : 1131	+
guide sleeve	+ CONTROL LEVER
travel mm : 6.38	+
Tolerance mm : +- 0.10	+

control lever position degree : 274.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1135 Tolerance 1/min : + 5 rack travel mm : -7.60 Rated speed rpm : 1240 Tolerance 1/min : + 15 rack travel mm : -11.10 Tolerance mm : + 0.50 Rated speed rpm : 1350	Rated speed rpm : 500 Pressure hPa : - - - - - - - - - - -
	Start interlock
LOW IDLE	Rated speed rpm : > 100 Rated speed rpm : < 225
control lever position degree : 251.0 tolerance degree : +- 4.0	Check
Setting point w/out bumper spring	5pccd (7mm)
Rated speed rpm : 200	FUEL DELIVERY CHARACTERISTICS
CRT mm min. : < -5.80	Aneroid pressure
Testing:	+ hPa : 1000 + Rated speed rpm : 1050
Rated speed rpm : 275 rack travel mm : -7.00 Tolerance mm : + 0.10	+ Del. quantity + cm3/1000 strokes : 280.0 + Tolerance
rack travel mm : -9.50 Rated speed rpm : 365 Tolerance 1/min : +- 20	cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0
TORQUE CONTROL	Aneroid pressure
Rated speed rpm : 600	Rated speed rpm : 500 Del. quantity
Rated speed rpm : 1050 Tolerance mm : +- 0.10	cm3/1000 strokes : 111.0
	cm3/1000 strokes : +- 1.0 Check tolerance
ANEROID/ALTITUDE COMPENSATOR TEST	cm3/1000s. : +- 4.0
SETTING	STARTING FUEL DELIVERY
Rated speed rpm : 500 Pressure hPa : 1000	Rated speed rpm : 100

D03

Del. quantity

cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : -7.09Tolerance mm : +0.10

Del. quantity

cm3/1000 strokes : 37.0

Tolerance

cm3/1000 @ rokes : +- 2.0

Check tolerance

cm3/1000s. : +- 5.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.07.98 : ISO 4113

Combination No. : 0 402 746 655

Injection pump

Pump designation : PES6P120A320RS7343

EP type number : 0 412 726 915

Governor

Governer design. : RQV300...1000PA1160

: -1K

Governer no. : 0 421 815 559

Cust. part No. : 5168 66-250

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDR 062356 B41

Power KW : 288.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

D05

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : ÷- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

"NW after s.o.d. : -0.40Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travei

: 11.00

Difference ° CS : 2.25

CRT ZERO POSITION

Rated speed rpm : 827			† Tolerance mm : +- 0.20
BASIC SETTING Rated speed rpm : 1000 guide sleeve travel mm : 3.66 Tolerance mm : + 0.25			+ guide sleeve
Rated speed rpm : 1000 Del. quantity			
Rated speed rpm : 1000 guide sleeve ravel mm : 3.66 Tolerance mm : + 0.25	BASIC SETTING		Poted aread area
Del. quantity m3/1000 strokes : 356.0 Tolerance mm : + 0.25 m3/1000 strokes : + 1.0 Rated speed rpm : 1440 Check tolerance guide steeve 13.50 Tolerance cm3/1000s : + 4.0 GUIDE SLEEVE POSITION Spreed GUIDE SLEEVE POSITION Tolerance cm3/1000 strokes : 5.0 control lever position degree : -1 Rated speed rpm : 1275 Rack travel in mm : 12.60 Check tolerance cm3/1600s. : 9.0 Rack degree rpm : 1275 Rack travel in mm : -8.00 Rated speed rpm : 1000 Rack travel in mm : -9.00 Rated speed rpm : 1000 Rack travel in mm : -9.00 Rated speed rpm : 1000 Rack travel in mm : -9.00 Rated speed rpm : 1000 Rack travel in mm : -9.00 Rated speed rpm : 1000 Tolerance rm : -9.00 Rated speed rpm : 1000 Tolerance cm3/1000 strokes : 39.0 Del. quantity cm3/1000 strokes : + 1.5 Tolerance Check tolerance cm3/1000 strokes : + 1.0 cm3/1000 strokes : + 5.0 Spreed Tolerance Tolerance cm3/1000 strokes : 8.0 Tolerance Check tolerance cm3/	Rated speed rpm	: 1000	duide sleeve
Tolerance cm3/1000 strokes : +- 1.0		: 356.0	Tolerance mm : + 0.25
Check tolerance cm3/1000s. : + 4.0 Spreed Control lever position degree : - 1 Rated speed rpm : 1275 Check tolerance cm3/1000s. : 9.0 Rated speed rpm : 1275 Rack travel in mm : -8.00 Rated speed rpm : 1000 Rated speed rpm : 1000 Rack travel in mm : -8.00 Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Pol. quantity pel. quantity cm3/1000 strokes : 356.0 Tolerance cm3/1000 strokes : 4 1.5 Tolerance cm3/1000 strokes : 356.0 Check tolerance cm3/1000s. : + 5.0 Tolerance cm3/1000 strokes : 4.0 Spreed cm3/1000 strokes : * 1.0 Spreed check tolerance cm3/1000s. : + 4.0 Tolerance cm3/1000s. : * 2.0 * 4.0 Spreed Tolerance cm3/1000s. : * 4.0 Tolerance cm3/1000s. : * 2.0 * 5.0 Check tolerance cm3/1000s. : * 2.0 * 5.0 Check tolerance cm3/1000s. : * 4.0 * 5.0 Check tolerance cm3/1000s. : * 4.0 * 5.0 Check tolerance cm3/1000s. : * 4.0 * 5.0 Check tolerance cm3/1000s. : * 9.0 * 6.0		: + 1.0	guide sleeve trevel mm . 13.50
Spreed Tolerance Cm3/1000 strokes : 5.0 Full Load Delivery 1275		: + 4.0	+ Toterance mm : +- U.SU +
cm3/1000 strokes : 5.0 5.0 position degree : - 1 Rated speed rpm : 1275 Check tolerance cm3/100S. : 9.0 Rack travel in mm : 12.00 Tolerance mm : + 1.30 Rated speed rpm : 300 FULL LOAD DELIVERY AT FULL LOAD STOP Rack travel in mm : -8.00 Tolerance mm : + 0.10 Aneroid pressure bPL quantity cm3/1000 strokes : 39.0 Tolerance cm3/1000 strokes : 356.0 Tolerance cm3/1000 strokes : 4.5 Del. quantity cm3/1000 strokes : 356.0 Tolerance cm3/1000 strokes : 4.0 Spreed Cm3/1000 strokes : 4.0 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 6.0 Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Ch	Spreed		+ GUIDE SLEEVE POSITION
Check tolerance cm3/1630S. : 9.0 Rack travel in mm : 12.00 Rated speed rpm : 300 FULL LOAD DELIVERY AT FULL LOAD STOP Rack travel in mm : −8.00 Rated speed rpm : 1000 Tolerance mm : + 0.10 Aneroid pressure Del. quantity hPa : 1200 cm3/1000 strokes : 39.0 Del. quantity Tolerance cm3/1000 strokes : + 1.5 Tolerance cm3/1000 strokes : 356.0 cm3/1000 strokes : + 5.0 Check tolerance cm3/1000 strokes : + 1.0 cm3/1000 strokes : £.0 Check tolerance cm3/1000S. : + 4.0 cm3/1000 strokes : £.0 Tolerance cm3/1000 strokes : 5.0 cm3/1000S. : 12.0 Check tolerance cm3/1000S. : 9.0 CB) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER GUIDE SLEEVE TRAVEL control lever position degree : 296.0 tolerance degree : + 4.0 Rated speed rpm : 1113 guide sleeve RATED SPEED rack travel mm : -1.00 Rated speed rpm : 1100 Rated speed rpm : 300 guide sleeve Tolerance 1/min : + 5	cm3/1000 strokes	: 5.0	position degree : - 1
Rack travel in mm : -8.00 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 39.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000 strokes : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Tolerance : 4.0 Tolerance in the complete in the compl		: 9.0	Rack travel in mm : 12.00
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 39.0 Tolerance cm3/1000 strokes : + 1.5 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : £.0 Check tolerance cm3/1000 strokes : £.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 4.0 Spreed Tolerance cm3/1000 strokes : 4.0 Tolerance cm3/1000 strok	Rated speed rpm	: 300	FULL LOAD DELIVERY AT FULL LOAD STOP
GUIDE SLEEVE TRAVEL Rated speed rpm : 1113 guide sleeve travel mm : 8.82 Tolerance mm : + 0.15 Rated speed rpm : 300 Rated speed rpm : 300 Rated speed rpm : 5	Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000S.	 : ← 0.10 : 39.0 : ← 1.5 : ← 5.0 : €.0 : 12.0 	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 356.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
Rated speed rpm : 1113			CONTROL LEVER
Rated speed rpm : 1113			
Tolerance mm : + 0.15	guide sleeve		tolerance degree : +- 4.0
guide sleeve +	Tolerance mm	: + 0.15	rack travel mm : -1.00 Rated speed rpm : 1100
	guide sleeve		+

Rated speed rpm : 1225 Tolerance 1/min : +- 15	‡	Tolerance mm	: +- 0.30
rack travel mm : -12.50	1	MEASUREMENT	
Tolerance mm : + 0.50 Rated speed rpm : 1350	Ţ	Rated speed rpm	: 1000
		Pressure hPa rack travel mm Tolerance mm	: 320 : -3.00 : +- 0.15
LOW IDLE	-	Pressure hPa rack travel mm Tolerance mm	: -1.90
control lever	†		
position degree : 252.0 tolerance degree : +- 4.0	Ī	Start interlock	
_			
Setting point w/out bumper sp Rated speed rpm : 200	ring †	Rated speed rpm Rated speed rpm	: > 100 : < 240
Rated Speed Ppiii : 200	Ī	Check	
CRT mm min. $: > -7.00$	+	speed 1/min	: > 80
Testing:	Į	Check speed 1/min	: < 250
_	+	·	
Rated speed rpm : 300 rack travel mm : -8.00	1	FUEL DELIVERY CHA	DACTEDISTICS
Tolerance mm : +- 0.10	1	TOLL DELIVERY CHA	RACIERISTICS
700	+		
Rated speed rpm : 390	Ī	Aneroid pressure hPa	: 1200
		nra Rated speed rpm	: 600
TORQUE CONTROL	+	Del. quantity	700.0
Rated speed rpm : 1000	1	cm3/1000 strokes Tolerance	: 390.0
Rated speed rpm : 600	+	cm3/1000 strokes	
rack travel mm : -0.40	+	Check tolerance	
Tolerance mm : + 0.15	‡	cm3/1000s.	: ← 6.0
Rated speed rpm : 800	+		
rack travel mm : 0.10 Tolerance mm : - 0.15	+	rack travel mm	
Tolerance num : → 0.15	‡	Tolerance mm	: +- 0.15
Rated speed rpm : 350	+		
rack travel mm : -1.55 Tolerance mm : +- 0.30	İ	Aneroid pressure hPa	
Total article man	+	Rated speed rpm	500
ANDROTO /AL TITUDE		Del. quantity	
ANEROID/ALTITUDE COMPENSATOR TEST	Ī	cm3/1000 strokes Tolerance	: 238.0
	+	cm3/1000 strokes	: +- 1.0
SETTING	1	Check tolerance cm3/1000s.	: +- 4.0
02111140	Į	01137 1 0003 .	4.0
Rated speed rpm : 1000	+		
Pressure hPa : 1200	1	STARTING FUEL DEL	TVFRY
Rated speed rpm : 500	+		
Pressure hPa : - rack travel mm : -4.20	†	Rated speed rpm rack travel mm	: 100
rack travel mm : -4.20	†	rack travet mm	: 20.25

: ← 0.75
: 185.0
: ← 15.0
: +- 19.0

LOW IDLE

Rated speed rpm	:	300	
Rack travel in mm Tolerance mm Del. quantity	-	-8.00 ← 0.10	
= 44000	:	39 .0	
cm3/1000 strokes Check tolerance	:	⊢ 1.5	
cm3/1000s. Spreed	:	+- 5.0	
Tolerance cm3/1000 strokes Check tolerance	:	8.0	
cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.06.98 : ISO 4113

Combination No. : 0 402 846 302

Injection pump

Pump designation : PE6P120A320RS8520 EP type number : 0 412 826 202

Governor

Soverner design. : RQV275...1000PA1269K

Governer no. : 0 421 815 969

Cust. part No. : 1310222/2

Customer-spec. information

Customer : DAF

Motor

: XF 355 M

Power KW : 355.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 086

Inlet press. bar :

Tolerance bar : +- 0.1

Overflow quantity
min. L/h : 110
Tolerance L/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

: 208.5

Tolerance bar : + 1.5

Outside diameter : 8.0 x inside diameter: 3.0

Test lines : 1 680 750 089

x length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 4.85 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm :

980

Rack travel in mm: 14.05

Tolerance mm : +- 0.05

	+	guide sleeve
Del. quantity cm3/1000 strokes	: 344.0	travel mm : 13.50 Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: + 1.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000s.	: + 5.0	Rated speed rpm : 1121
Spreed	+	Rack travel in mm : 13.30 Tolerance mm : +- 1.30
÷.1	†	
Tolerance cm3/1000 strokes	: 8.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000s.	: 13.0	Rated speed rpm : 980 Aneroid pressure
		hPa : 1500 Del. quantity
	I	cm3/1000 strokes : 344.0
Rated speed rpm	: 275	Tolerance
via voa oposa v piii	+	cm3/1000 strokes : + 1.0
Rack travel in mm		Check tolerance
Tolerance mm	: ← 0.10 +	cm3/1000s. : +- 5.0
Del. quantity	+	Spreed
cm3/1000 strokes	: 14.5 +	Tolerance
Tolerance	+	cm3/1000 strokes : 8.0
cm3/1000 strokes	: ← 3.0 +	Check tolerance
Check tolerance cm3/1000s.	: +- 6.0	cm3/1000s. : 13.0
Spreed	· += 0.0	
Tolerance	I	
cm3/1000 strokes	: 6.0	CONTROL LEVER
Check tolerance	+	John Colonia C
cm3/1000s.	: 12.0	control lever
	+	position degree : 118.0
	+	tolerance degree : - 4.0
(B) SETTING OF IN.	JECTION PUMP +	
WITH GOVERNOR	+	RATED SPEED
	+	rack travel mm : 13.05
CUIDE OF FEITE TRAVE		Rated speed rpm : 1045
GUIDE SLEEVE TRAVE	" †	Tolerance 1/min : +- 5
Rated speed rpm	: 1058	Check speed 1/min : +- 10
guide sleeve	. 1030	speed 1/11/11 . To
travel mm	: 9.97	rack travel mm : 4.00
Tolerance mm	: +- 0.15	Rated speed rpm : 1140
	+	Tolerance 1/min : +- 15
Rated speed rpm	: 275	Check
guide sleeve	+	speed $1/\min$: \leftarrow 20
travel mm	: 2.04 +	
Tolerance mm	: + 0.20 +	rack travel mm : 0.70
Dakad	+	Tolerance mm : + 0.70
Rated speed rpm	: 399 +	Rated speed rpm : 1275
guide sleeve travel mm	: 3.65	
Tolerance mm	: + 0.25	
TOTAL MILE	· · · · · · · · · · · · · · · · · · ·	
Rated speed rpm	: 1260	LOW IDLE

control lever position degree tolerance degree	: 73.0 : ← 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 175
CRT mm mir.	: > 8.50
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 275 : 6.00 : ← 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 980 : 14.05 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 800 : 14.05 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 750 : 13.80 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.45 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 980 : 14.30 : ← 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 980 : 1500 : 14.05 : +- 0.05

Rated speed rpm	: 980
Pressure hPa	: -
rack travel mm	: 9.00
Tolerance mm	: +- 0.10
MEASUREMENT	
Rated speed rpm	: 980
Pressure hPa	: 750
rack travel mm	: 12.80
Tolerance mm	: + 0.05
Pressure hPa	: 380
rack travel mm	: 10.30
Tolerance mm	: + 0.15

FUEL DELIVERY CHARACTERISTICS

FUEL DELIVERY CHA	IKA	LIE	3121702
Aneroid pressure			
hPa	:	•	1500
Rated speed rpm	:		750
rack travel mm	:		13.80
Tolerance mm	:	+-	0.05
Del. quantity			
cm3/1000 strokes	:		361.0
Tolerance			
cm3/1000 strokes	:	+-	2.0
Check tolerance			
cm3/1000s.	:	+	6.0
Spreed			
Tolerance			
cm3/1000 strokes	:		10.0
Check tolerance			
cm3/1000s.	:		15.0
Aneroid pressure			
hPa	:		-
Rated speed rpm	:		600
Del. quantity			
cm3/1000 strokes	:		199.0

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	600
Del. quantity		
cm3/1000 strokes	:	199.0
Tolerance		
cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	10.0
Check tolerance		
cm3/1000s.	:	15.0
- - -		

LOW IDLE

Rated speed rpm	:		275	
Rack travel in mm Tolerance mm Del. quantity		+-	6.00 0.10	
cm3/1000 strokes	:		14.5	
Tolerance cm3/1000 strokes	:	+-	3.0	
Check tolerance cm3/1000s.	:	+-	6.0	
Spreed Tolerance				
cm3/1000 strokes Check tolerance	:		6.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 01.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 027

Injection pump

Pump designation : PES6P120A320RS8047

EP type number : 0 412 926 029

Governor

Governer design. : RQV275...1250PA1312K

Governer no. : 0 421 815 966

Cust. part No. : CCEP 5160A 66-244

Customer-spec. information

Customer : RENAULT V.I.

Motor : MIDR 06.02.26L71 Power KW : 141.7

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 145
Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 11.00

Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : **←** 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

"NW after s.o.d. : -0.25 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00 mm

and maximum rack

11.00 travel

Difference ° CS : 3.25

		1.
		Rated speed rpm : 325 guide sleeve
CRT ZERO POSITION		+ travel mm : 1.52 + Tolerance mm : + 0.20
Rack travel in mm : Tolerance mm		Rated speed rpm : 923 guide sleeve
		+ travel mm : 6.76 + Tolerance mm : +- 0.25
BASIC SETTING		+
Rated speed rpm	: 1250	+ Rated speed rpm : 550 + guide sleeve + travel mm : 3.92
Del. quantity cm3/1000 strokes :	: 180.0	+ Tolerance mm : + 0.25
Tolerance		+ Rated speed rpm : 1650 + guide sleeve
cm3/1000 strokes :	: +- 1.0	travel mm : 13.50 Tolerance mm : +- 0.50
	: +- 4.0	GUIDE SLEEVE POSITION
Spreed		+
Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1430
Check tolerance cm3/1000S.	9.0	Rack travel in mm : 11.10 Tolerance mm : + 2.70
Rated speed rpm :	: 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : Tolerance mm :		Rated speed rpm : 1250 Arieroid pressure
Del. quantity cm3/1000 strokes :	: 39.0	+ hPa : 1600 + Del. quantity
Tolerance cm3/1000 strokes : Check tolerance	· + 1.0	+ cm3/1000 strokes : 180.0 + Tolerance - cm3/1000 strokes : +- 1.0
	· · 6.0	Check tolerance + cm3/1000s. : +- 4.0
Tolerance cm3/1000 strokes :	: 8.0	- Spreed - Tolerance
Check tolerance cm3/1000s. :	: 12.0	- cm3/1000 strokes : 5.0 - Check tolerance
		+ cm3/1000s. : 9.0
(B) SETTING OF INJE	ECTION PUMP	
		+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	•	control lever
Rated speed rpm : guide sleeve	1340	+ position degree : 292.0 + tolerance degree : +- 4.0
travel mm :	9.96 + 0.15	+ RATED SPEED + rack travel mm : -1.00

Rated speed rpm : 1310 Tolerance 1/min : +- 15	+ rack travel mm : -4.80 Tolerance mm : +- 0.20
rack travel mm : -8.00 Rated speed rpm : 1450	MEASUREMENT
Tolerance 1/min : +- 5	Rated speed rpm : 1250
rack travel mm : -11.50 Tolerance mm : +- 0.55 Rated speed rpm : 1600	Pressure hPa : 240 rack travel mm : -3.20 Tolerance mm : + 0.20
LOW IDLE	Pressure hPa : 520 + rack travel mm : -1.30 + Tolerance mm : +- 0.05
	Start interlock
control lever position degree : 241.0 tolerance degree : +- 4.0	Rated speed rpm : > 175 Rated speed rpm : < 240
Setting point w/out bumper spring	Check :> 155
Rated speed rpm : 200	+ Check - speed 1/min : < 260
CRT mm min. : < −5.70	
Testing:	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 325 rack travel mm : -7.10 Tolerance mm : + 0.10	Aneroid pressure hPa : 1600
Rated speed rpm : 325	+ Rated speed rpm : 650 + Del. quantity + cm3/1000 strokes : 169.0
TORQUE CONTROL Rated speed rpm : 1250	Tolerance cm3/1000 strokes : + 3.0 Check tolerance
Rated speed rpm : 650 rack travel mm : -2.10 Tolerance mm : +- 0.10	+ cm3/1000s. : + 6.0 + rack travel mm : -3.25
Rated speed rpm : 350 rack travel mm : -3.25 Tolerance mm : +- 0.25	+ Tolerance mm : + 0.25 - Aneroid pressure + hPa : -
ANEROID/ALTITUDE	Rated speed rpm : 500 Del. quantity
COMPENSATOR TEST	+ cm3/1000 strokes : 114.0 + Tolerance + cm3/1000 strokes : +- 1.0
SETTING	+ Check tolerance + cm3/1000s. : +- 4.0
Rated speed rpm : 1250 Pressure hPa : 1600 Tolerance mm : +- 0.10	‡
Rated speed rpm : 500	+ STARTING FUEL DELIVERY
Pressure hPa : -	+ Rated speed rpm : 100

Del. quantity cm3/1000 strokes : 113.0 Tolerance cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : + 14.0

LOW IDLE

Rated speed rpm : 325

Rack travel in nm : -7.10 Tolerance mm : + 0.10 Del. quantity cm3/10GO strokes : 39.0 Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-6.0

Spreed

Tolerance

8.0 cm3/1000 strokes :

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 06.07.98 Test oil : ISO 4113

Combination No. : 0 400 863 020

Injection pump

Pump designation : PES3A95D410/3RS2905

EP type number : 0 410 893 996

Governor

Governer design: : RSV325...1250A50858L

Governer no. : 0 420 232 621

Cust. part No. : 0423 1592 KY

Customer-spec. information

Customer : KHD-DMI

Motor : F3L912/913_NEU Power KW : 40.5

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1- 3- 2

: 0-120-240 Phasing Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s.

: +- 3.0

Spreed

Talanamaa	
Tolerance	+ Check tolerance
cm3/1000 strokes : 3.5	+ cm3/1000s. : 8.0
	1
Check tolerance	+
cm3/1000s. : 8.0	
	+ CONTROL LEVER
	+
	- control lever
Rated speed rpm : 325	position degree : 107.0
·	+ tolerance degree : + 4.0
Rack travel in mm : 8.50	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity	+ rack travel mm : 10.35
cm3/1000 strokes : 11.5	+ Rated speed rpm : 1295
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : +- 2.0	+
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	+ rack travel mm : 4.00 + Rated speed rpm : 1355
Spreed	+ Tolerance 1/min : + 15
Tolerance	+
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 9.0	+ Rated speed rpm : 1530
	1
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1380
WITH GOVERNOR	+ Tolerance 1/min : +- 15
WATTI GOVERNOON	
	\perp
	1
GUIDE SLEEVE POSITION	
	LOW IDLE
	4
control lever	1
position degree : FREE	- control lever
Rated speed rpm : 800	+ position degree : 74.0
	+ tolerance degree : + 4.0
Rack travel in mm : 0.50	1
Tolerance mm : + 0.20	+ Setting point w/out bumper spring
, , , , , , , , , , , , , , , , , , , ,	- control of the cont
governor spring	Rated speed rpm : 325
pre-tension	+ rack travel mm : 3.00
click setting x : 4.25	+ Tolerance mm : + 0.10
The second of th	1
	Poted aroad 100
	😁 - Kaleu Sueeo FDM : (18)
FULL LOAD DELIVERY AT FULL LOAD STOP	+ Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	CRT mm min. : > 19.50
Rated speed rpm : 1250	CRT mm min. : > 19.50
Rated speed rpm : 1250 Aneroid pressure	+
Rated speed rpm : 1250 Aneroid pressure hPa : -	CRT mm min. : > 19.50 Testing:
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510
Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed	CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 510

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : **←** 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25
Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 125.0 Tolerance

cm3/1000 strokes : + 7.5

Check tolerance

cm3/1000S. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : \leftarrow 0.10 Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

: ← 4.5 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.07.98 : ISO 4113

Combination No. : 0 400 864 099

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Coverner design. : RSV325...1250A5C358L

Governer no. : 0 420 232 621

Cust. part No. : 0423 1595 KY

Customer-spec. information

: KHD-DMI Customer

: F4L912/913_NEU Motor

Power KW

: 54.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

: +- 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm : 3.00

Tolerance mm

: + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

Phasing : 0-90-180-270

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm: 11.35

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: **←** 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	+ Check tolerance + cm3/1000s. : 8.0
	+ cm3/1000s. : 8.0
Check tolerance cm3/1000S. : 8.0	<u> </u>
	CONTROL LEVER
	+ control lever
Rated speed rpm : 325	+ position degree : 107.0 + tolerance degree : + 4.0
Rack travel in mm : 8.50	Total diloc degree . 4.0
Tolerance mm : +- 0.10	+ RATED SPEED
Del. quantity	+ rack travel mm : 10.35
cm3/1000 strokes : 11.5	+ Rated speed rpm : 1295
Tolerance	+ Tolerance 1/min : + 5
cm3/1000 strokes : + 2.0	Total direction in the contract of the contrac
Check tolerance	rack travel mm : 4.00
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1355
Spreed	Tolerance 1/min : +- 15
Tolarance	T TOTAL PRINCE TABLE . 19 19
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : +- 0.55
cm3/1000s. : 9.0	
(III.) 10003 7.U	+ Rated speed rpm : 1530
	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1380
WITH GOVERNOR	+ Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	+
position degree : FREE	+ control lever
Rated speed rpm : 800	+ position degree : 74.0
	+ tolerance degree : + 4.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	+ Setting point w/out bumper spring
	Potentian and area 725
governor spring	Rated speed rpm : 325
pre-tension	rack travel mm : 8.00
click setting x : 4.25	+ Tolerance mm : + 0.10
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD STOP	+
Pated speed rom · 1250	+ CRT mm min. : > 19.50
Rated speed rpm : 1250	Tooting
Aneroid pressure	+ Testing:
hPa : -	Dated aread 725
Del. quantity	+ Rated speed rpm : 325
cm3/1000 strokes : 76.0	rack travel mm : 8.50
Tolerance	+ Tolerance mm : + 0.10
cm3/1000 strokes : +- 1.0	
Check tolerance	+ rack travel mm : 2.00
cm3/1000s. : +- 3.0	+ Rated speed rpm : 510
Spreed	+ Tolerance 1/min : +- 30
Tolerance	† Tolerance 1/min : + 30
	TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : **←** 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 : **←** 0.75 Tolerance mm Del. quantity

cm3/1000 strokes : 125.0 Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : +- 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : ← 0.10

Del. quantity

cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.07.98 : ISO 4113

Combination No. : 0 400 864 102

Injection pump

Pump designation : PES4A95D410/3RS2789

EP type number : 0 410 894 995

Governor

Governer design. : R\$V325...1250A50851L

Governer no. : 0 420 232 624

Cust. part No. : 0423 1789 KY

Customer-spec. information Customer : KHD-DMI

Motor

: F4L912/913 NEU

Power KW

: 59.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. $^{\circ}$ C : 40 Tolerance $^{\circ}$ C : + 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 3.00 Tolerance mm : 4 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-3-4-2

: 0-90-180-270 Phasing

Toterance : - 0.50

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

Tolerance mm : ← 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: **←** 3.0

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance : 8.0	
	_
Rated speed rpm : 325	control lever position degree : 102.0 tolerance degree : +- 4.0
Rack travel in mm : 8.50 Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 11.5 Tolerance	rack travel mm : 10.35 Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	+
Check tolerance cm3/1000S. : +- 4.5 Spreed	+ rack travel mm : 4.00 + Rated speed rpm : 1339 + Tolerance 1/min : 15
Tolerance cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance cm3/1000s. : 9.0	Tolerance mm : + 0.55 Rated speed rpm : 1510
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1360 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : FREE Rated speed rpm : 800	control lever position degree : 69.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : +- 4.0 Setting point w/out bumper spring
governer spring pre-tension	+ Rated speed rpm : 325 + rack travel mm : 8.00
click setting $x : 3.00$	rack travel mm : 8.00 Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
Rated speed rpm : 1250	CRT mm min. : > 19.50
Aneroid pressure	Testing:
hPa : - Del. quantity cm3/1000 strokes : 76.0	Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : +- 0.10
Tolerance cm3/1000 strokes : +- 1.0	+
Check tolerance	+ rack travel mm : 2.00
cm3/1000s. : + 3.0 Spreed	+ Rated speed rpm : 473 + Tolerance 1/min : +- 30

Rated speed rpm : 1250 11.35 rack travel mm Tolerance mm : **←** 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel min : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 125.0

Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : **←** 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : +- 2.0 Check tolerance

cm3/1000s. : ← 4.5

Spreed Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.07.98 : ISO 4113

Combination No. : 0 400 866 222

Injection pump

Pump designation : PES6A95D410/3RS2907 EP type number : 0 410 896 884

Governor

Governer design. : RSV325...1250A50950L

Governer no. : 0 420 232 641

Cust. part No. : 0423 1601 KY

Customer-spec. information Customer : KHD

Motor

: F6L912/913 NEU

Power KW

: 81.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar $: \leftarrow 1.0$

Prestroke mm : 3.00 Tolerance mm : + C.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-50-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000S.

: +- 3.0

Spreed	Tolerance : 3.5
Tolerance - cm3/1000 strokes : 3.5 -	Check tolerance : 8.0
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 107.0 tolerance degree : +- 4.0
Rack travel in mm: 8.50 -	+
Tolerance mm : + 0.10	RATED SPEED
Del. quantity - cm3/1000 strokes : 11.5 -	rack travel mm : 10.35 Rated speed rpm : 1295
Tolerance -	Rated speed rpm : 1295 Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	Toterance minit . ,
Check tolerance -	rack travel mm : 4.00
cm3/1000s. : +- 4.5	Rated speed rpm : 1355
Spreed -	Tolerance 1/min : +- 15
Tolerance	+
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance - cm3/1000s. : 9.0 -	Tolerance mm : +- 0.55 Rated speed rpm : 1550
- Care Tucos 7.0	L Rated speed (pill . 1330
-	rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1400
WITH GOVERNOR -	Tolerance 1/min : + 15
-	+
-	
GITDE SLEEVE POSITION	·
GUIDE SLEEVE POSITION	LOW IDLE
-	LOW IDLE
control lever	
control lever - position degree : FREE -	control lever
control lever	control lever position degree : 73.0
control lever - position degree : FREE - Rated speed rpm : 800 -	control lever
control lever - position degree : FREE -	control lever position degree : 73.0
control lever - position degree : FREE - Rated speed rpm : 800 - Rack travel in mm : 0.50 -	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : -	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing:
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : +- 1.0	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 325 rack travel mm : 325
control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : +- 0.20 governor spring pre-tension click setting x : 4.25 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1250 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 76.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance	control lever position degree : 73.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 325 rack travel mm : 8.00 Tolerance mm : + 0.10 Rated speed rpm : 100 CRT mm min. : > 19.50 Testing: Rated speed rpm : 325 rack travel mm : 8.50 Tolerance mm : + 0.10 rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : + 0.05

Rated speed rpm : 500

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity

cm3/1000 strokes : 125.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : \leftarrow 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 8.50
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000s. : +- 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.07.98 : UC.U(.90 : ISO 4113

Combination No. : 0 400 876 421

Injection pump

Pump designation : PES6A95D32ORS2848 EP type number : 0 410 896 892

Governor

Governer design. : RSV500...1100A5C2269

Governer no. : 0 420 233 338

Cust. part No. :

Customer-spec. information

Customer : VALMET

Motor Power KW

: 634 DS : 140.0

TEST BENCH REQUIREMENTS

Inlet line : 2.3

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x inside diameter: 2.0

x Length mm :

per values ____

REMARKS

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.55 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Beginning of delivery differende

and maximum rack

travel : 10.50 Tolerance mm : +- 1.50

Difference ° CS : 5.00

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 14.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 133.0

E01

Tolerance + 1.0 + 1.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000s. : +- 3.0 Spreed Tolerance
Spreed	cm3/1000 strokes : 3.5 Check tolerance
Tolerance cm3/1000 strokes : 3.5	- cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	CONTROL LEVER
Rated speed rpm : 500	control lever position degree : 100.0 tolerance degree : +- 4.0
Rack travel in mm: 4.30 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 21.0	RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1145 Tolerance 1/min : +- 5
Tolerance cm3/1000 strokes : +- 3.0 check tolerance cm3/1000s. : +- 4.5	rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : + 15
Spreed Tolerance cm3/1000 strokes : 5.5 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1375
cm3/1000s. : 9.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever position degree : -3 Rated speed rpm : 800	control lever position degree : 74.0 tolerance degree : +- 4.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 100
pre-tension click setting x : 3.75	CRT mm min. : > 19.50
	Testing:
FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1100	Rated speed rpm : 500 rack travel mm : 4.30 Tolerance mm : +- 0.10
Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 133.0	rack travel mm : 2.00 Rated speed rpm : 530 Tolerance 1/min : + 30

SET IDLE AUXILIARY SPRING

rack travel mm : 2.00

TORQUE CONTROL

Rated speed rpm : 1100 rack travel mm : 14.05 Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 14.60 Tolerance mm : \leftarrow 0.10

Rated speed rpm : 975
rack travel mm : 14.30
Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 900 Pressure hPa 900 : 14.60 Tolerance mm : + 0.10

Rated speed rpm : 500 Pressure hPa : - rack travel mm : 12.90 Tolerance mm : + 9.05

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 550 rack travel mm : 13.20 Tolerance mm : + 0.10

Pressure hPa : 655 rack travel mm : 13.90 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 137.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : +- 4.0

rack travel mm : 14.30 Tolerance mm : +- 0.10

Aneroid pressure

hPa Rated speed rpm : 500

Del. quantity

cm3/1000 strokes : 103.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : +- 0.75

Del. quantity

cm3/1000 strokes : 195.0

Tolerance

cm3/1000 strokes : +- 7.5

Check tolerance

cm3/1000s. : \leftarrow 10.0

LOW IDLE

Rated speed rpm : 500

Rack travel in mm: 4.30 Tolerance mm : +- 0.10 Del. quantity

cm3/1000 strokes : 21.0

Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

cm3/1000s. : ← 4.5

Spreed Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.98 : ISO 4113

Combination No. : 0 402 046 855

Injection pump

Pump designation : PES6P11UA32ORS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQV325...1300PA1119

Governer no. : 0 421 814 083

Cust. part No. : 1284418/4

Customer-spec. information Customer : DAF : NS156M Motor Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : ← 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 4.85
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

: +- 0.10 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 144.0	† Tolerance mm : ← 0.25
Tolerance	Rated speed rpm : 455 guide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 2.52
CIB/1000 Strokes . Te 1.0	
Charle tallarens	Tolerance mm : +- 0.25
Check tolerance	†
cm3/1000s. : +- 4.0	+ Rated speed rpm : 530
	† guide sleeve
Spreed	+ travel mm : 2.93
	+ Tolerance mm : + 0.25
Tolerance	-
cm3/1000 strokes : 8.0	+ Rated speed rpm : 1640
	- guide sleeve
Check tolerance	+ travel mm : 11.50
cm3/1000S. : 12.0	+ Tolerance mm : +- 0.50
CIID/ 10003. : 12.0	Toterance min : T 0.50
·	†
705	+ GUIDE SLEEVE POSITION
Rated speed rpm : 325	†
	+
Rack travel in mm : 4.50	+ control lever
Tolerance mm : +- 0.10	→ position degree : - 1
Del. quantity	+ Rated speed rpm : 1450
cm3/1000 strokes : 26.0	1
Tolerance	Rack travel in mm : 16.80
cm3/1000 strokes : +- 2.5	+ Tolerance mm : + 1.30
Check tolerance	Total ance man . 1- 1.30
	T
	FILL LOAD DELTHEOU AT FILL LOAD OTOD
Spreed	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	_ †
cm3/1000 strokes : 4.0	+ Rated speed rpm : 1000
Check tolerance	+ Aneroid pressure
cm3/1000S. : 8.0	+ hPa : 1000
	+ Del. quantity
	+ Del. quantity + cm3/1000 strokes : 144.0
(B) SETTING OF INJECTION FURP	+ cm3/1000 strokes : 144.0
	+ cm3/1000 strokes : 144.0 + Tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ cm3/1000 strokes : 144.0 + Tolerance + cm3/1000 strokes : +- 1.0
	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
WITH GOVERNOR	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0
	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed
GUIDE SLEEVE TRAVEL	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance
GUIDE SLEEVE TRAVEL Rated speed rpm : 1353	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : +- 0.20 Rated speed rpm : 325 guide sleeve	- cm3/1000 strokes : 144.0 - Tolerance - cm3/1000 strokes : + 1.0 - Check tolerance - cm3/1000s. : + 4.0 - Spreed - Tolerance - cm3/1000 strokes : 8.0 - Check tolerance
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : +- 0.20 Rated speed rpm : 325 guide sleeve	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve travel mm : 4.92	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve travel mm : 4.92 Tolerance mm : + 0.25	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve travel mm : 4.92 Tolerance mm : + 0.25 Rated speed rpm : 405	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve travel mm : 4.92 Tolerance mm : + 0.25 Rated speed rpm : 405 guide sleeve	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5 Check
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1353 guide sleeve travel mm : 8.29 Tolerance mm : + 0.20 Rated speed rpm : 325 guide sleeve travel mm : 1.33 Tolerance mm : + 0.15 Rated speed rpm : 900 guide sleeve travel mm : 4.92 Tolerance mm : + 0.25 Rated speed rpm : 405	cm3/1000 strokes : 144.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5

rack travel mm Rated speed rpm Tolerance 1/min Check speed 1/min	: 4.00 : 1460 : ← 15 : ← 20
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LCW IDLE	
control lever position degree tolerance degree	: 83.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 6.0C
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.50 : + 0.10
Rated speed rpm	
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : ← 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.85 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 11.85 : +- 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT Rated speed rpm	: 600 : - : 7.35 : + 0.20
Rated Speed rpiii	. 600
Pressure hPa rack travel mm Tolerance mm	: 370 : 10.75 : +- 0.05
Pressure hPa rack travel mm Tolerance mm	: 200 : 8.40 : +- 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm: Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1000 : 700 : 145.0 : +- 2.0 : +- 5.0
rack travel mm Tolerance mm	: 11.85 : + 0.05
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 1000 : 94.0 : +- 1.0 : +- 3.5
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm	: 4.50 : +- 0.10

Del. quantity cm3/1000 strokes	:	26.0
Tolerance cm3/1000 strokes Check tolerance	: +-	2.5
cm3/1000s.	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.98 : ISO 4113

Combination No. : 0 402 046 856

Injection pump

Pump designation : PE6P110A320RS3329Z EP type number : 0 412 016 744

Governor

Governer design. : RQV325...1300PA1119

Governer no. : 0 421 814 083

Cust. part No. : 1284417/5

Customer-spec. information Customer : DAF

: NS133M Motor Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

: +- 2.0 Tolerance °C

Overflow valve : 1 417 413 025

Inlet press. bar :

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

E08

x inside diameter: 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.85 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85

Tolerance mm : \leftarrow 0.05

Del. quantity cm3/1000 strokes	: 146.0	+ Tolerance mm : + 0.25
Tolerance		Rated speed rpm : 455 guide sleeve
cm3/1000 strokes	· + 1 N	+ travel mm : 2.52
CIII TOO SEFORES	. + 1.0	
		+ Tolerance mm : + 0.25
Check tolerance		+
cm3/1000s.	: - 4.0	+ Rated speed rpm : 530
		+ guide sleeve
Spreed		+ travel mm : 2.93
spi eca		
		+ Tolerance mm : + 0.25
Tolerance		†
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1640
		+ guide sleeve
Check tolerance	Parameter Communication (Section 2) Communication (Communication Communication Communi	+ travel mm : 11.50
cm3/1000s.	. 12.0	
CIIIS/ (GOOS.	: 12.0	+ Tolerance mm : +- 0.50
		†
		+
		+ GUIDE SLEEVE POSITION
Rated speed rpm	325	<u>.</u>
opeca (pii	. 923	1
Donk Association	. / 50	T control loves
Rack travel in mm		+ control lever
Tolerance mm	: 0.10	+ position degree : -1
Del. quantity		+ Rated speed rpm : 1450
cm3/1000 strokes	· 26 ft	
Tolerance	. 20.0	Book traval in mm . 40 on
		+ Rack travel in mm: 10.80
cm3/1000 strokes	: ← 2.5	+ Tolerance mm : + 1.30
Check tolerance		+
cm3/1000s.	: 5.0	<u> </u>
Spreed	- 	FULL LOAD DELIVERY AT FULL LOAD STOP
		FOLL FOUR MELTACK! WE LOFF FOUR 2106
Tolerance	, 5	
cm3/1000 strokes	: 4.0	+ Rated speed rpm : 1000
Check tolerance		+ Aneroid pressure
cm3/1000s.	: 8.0	+ hPa : 1000
		+ Del. quantity
(2)		+ cm3/1000 strokes : 146.0
(B) SETTING OF INJ	JECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : +- 1.0
		+ Check tolerance
		+ cm3/1000s. : +- 4.0
GUIDE SLEEVE TRAVE	- · 	
ANTRE SPEENE IKANE	iL .	+ Spreed
		+ Tolerance
	: 1353	+ cm3/1000 strokes : 8.0
guide sleeve		+ Check tolerance
travel mm	: 8.29	+ cm3/1000s. : 12.0
Tolerance mm	: + 0.20	1
incelative inii	, ' - U, ZU	T
- · ·		†
Dated cooled nom	: 325	
Rated speed rpm	. 323	i
guide sleeve	. 323	+ CONTROL LEVER
gui d e sl ee ve		CONTROL LEVER
guide sleeve travel mm	: 1.33	+
gui d e sl ee ve		control lever
guide sleeve travel mm Tolerance mm	: 1.33 : + 0.15	control lever position degree : 122.0
guide sleeve travel mm Tolerance mm Rated speed rpm	: 1.33	control lever
guide sleeve travel mm Tolerance mm Rated speed rpm	: 1.33 : + 0.15	control lever position degree : 122.0
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1.33 : + 0.15 : 900	control lever position degree : 122.0 tolerance degree : + 4.0
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: 1.33 : +- 0.15 : 900 : 4.92	control lever position degree : 122.0 tolerance degree : +- 4.0 RATED SPEED
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1.33 : + 0.15 : 900	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1.33 : + 0.15 : 900 : 4.92 : + 0.25	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: 1.33 : +- 0.15 : 900 : 4.92	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 1.33 : + 0.15 : 900 : 4.92 : + 0.25	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: 1.33 : ← 0.15 : 900 : 4.92 : ← 0.25 : 405	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5 Check
guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: 1.33 : + 0.15 : 900 : 4.92 : + 0.25	control lever position degree : 122.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 10.85 Rated speed rpm : 1342 Tolerance 1/min : + 5

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rack travel mm Rated speed rpm	: 1460
Tolerance 1/min Check speed 1/min	: ← 15 : ← 20
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 83.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 225
CRT mm min.	: > 3.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 325 : 4.50 : +- 0.10
Rated speed rpm	: 375
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1000 : 11.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.85 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 1300 : 11.85 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : 1000 : 11.85 : +- 0.05

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 600 : - : 6.50 : + 0.20
MEASUREMENT	
Rated speed rpm	: 600
Pressure hPa rack travel mm Tolerance mm	: 310 : 10.55 : ← 0.05
Pressure hPa rack travel mm Tolerance mm	: 130 : 7.85 : ← 0.10
FUEL DELIVERY CHA	ARACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. rack travel mm Tolerance mm Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 145.0 : ← 2.0 : ← 5.0 : 11.85 : ← 0.05 : 1000 : 83.0 : ← 1.0
cm3/1000s.	: ← 3.5
LOW IDLE	
Rated speed rpm	: 325
Rack travel in mm Tolerance mm	n : 4.50 : ← 0.10

Del. quantity		
cm3/1000 strokes	:	26.0
Tolerance		
cm3/1000 strokes	: +-	2.5
Check tolerance		
cm3/1000s.	: +-	5.0
Spreed		
Tolerance		
cm3/1000 strokes	:	4.0
Check tolerance		
cm3/1000S.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.98 : ISO 4113

Combination No. : 0 402 046 861

Injection pump

Pump designation : PE6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQ325/1300PA1150 Governer no. : 0 421 801 716

Cust. part No. : 1284420/4

Customer-spec. information

Customer : DAF Motor

: NS156M

Power KW

: 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

: 40

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde assembly

: 1 688 901 101

Opening pressure

bar

208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

x inside diameter : 2.0 x length mm : 600

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.50

Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.85

Tolerance mm : \leftarrow 0.05

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Del. quantity cm3/1000 strokes	: 144.0	+ Tolerance mm : + 0.10
Talana		+ Rated speed rpm : 590
Tolerance cm3/1000 strokes	10	+ guide sleeve + travel mm : 6.00
CHO/ TOOD STEOKES	. — 1.0	Tolerance mm : + 0.10
Check tolerance	***************************************	+ Use a recent with the second
cm3/1000S.	: +- 4.0	+ Rated speed rpm : 1570
	***************************************	+ guide sleeve
Spreed		+ travel mm : 11.50
Tolerance		↑ Tolerance mm : ← 0.50
cm3/1000 strokes	: 8.0	I
		+ GUIDE SLEEVE POSITION
Check tolerance		+
cm3/1000S.	: 12.0	+
		+ control lever
		+ position degree : 109 + Rated speed rpm : 650
Rateci speed rpm	: 325	- Rated speed (pill . 000
opeca (pii		Rack travel in mm: 20.00
Rack travel in mm		+ Tolerance mm : +- 0.80
Tolerance mm	: ← 0.10	+
Del. quantity	24.0	FILL LOAD OF THERWAY AT FIRE LOAD OFF
cm3/1909 strokes Tolerance	: 26.U	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: +- 2.5	Rated speed rpm : 1000
Check tolerance		+ Aneroid pressure
cm3/1000s.	: +- 5.0	+ hPa : 1000
Spreed		+ Del. quantity
Tolerance	: 4.0	+ cm3/1000 strokes : 144.0
cm3/1000 strokes Check tolerance	; 4 .U	+ Tolerance + cm3/1000 strokes : +- 1.0
cm3/1000s.	: 8.0	+ Check tolerance
		+ cm3/1000s. : + 4.0
		Spreed
(B) SETTING OF INJ	ECTION PUMP	+ Tolerance
WITH GOVERNOR		cm3/1000 strokes : 8.0
		+ Check tolerance + cm3/1000s. : 12.0
GUIDE SLEEVE TRAVE	:L	+
		+
,,,	: 1351	+
guide sleeve travel mm	: 6.37	+ CONTROL LEVER
	: +- 0.10	t control lever
70 COT CITICO TIMIT		+ position degree : 93.0
Rated speed rpm	: 325	+ tolerance degree : +- 4.0
guide sl e eve		+
travel mm	: 1.99	+ RATED SPEED
Tolerance mm	: +- 0.10	+ rack travel mm : 10.85 + Rated speed rpm : 1345
Rated speed rpm	: 1300	+ Tolerance 1/min : +- 5
guide sleeve		+ Check
travel mm	: 6.00	+ speed 1/min : + 10
Tolerance mm	: ← 0.10	†
Dated anced and		+ rack travel mm : 4.00
Rated speed rpm guide sleeve	: 427	+ Rated speed rpm : 1450 + Tolerance 1/min : + 15
travel mm	: 3.54	+
		•

Check speed 1/min : +- 20 Rated speed rpm : 1600 LOW IDLE control lever position degree : 72.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 225 CRT mm min. :> 5.90Testing: Rated speed rpm : rack travel mm : 325 4.50 : +- 0.10 Tolerance mm 2.00 rack travel mm : Rated speed rpm : 415 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 1300 rack travel mm : 11.8 11.85 Tolerance mm : ← 0.05 Rated speed rpm : 1000 rack travel mm : 12.85 Tolerance mm : +- 0.10 ANEROID/ALTITUDE

COMPENSATOR TEST

SETTING

Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 11.85 Tolerance mm : + 0.05

Rated speed rpm : 600 Pressure hPa rack travel mm : 7.35 Tolerance mm : + 0.20

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 370 rack travel mm : 10.75 : +- 0.05 Tolerance mm

Pressure hPa : 200 rack travel mm : 8.55 Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 Rated speed rpm : 700

Del. quantity

cm3/1000 strokes : 145.0 Tolerance

cm3/1000 strokes : \leftarrow 2.0 Check tolerance

cm3/1000s. : +-5.0

rack travel mm : 11.85 Tolerance mm : → 0.05

Aneroid pressure

hPa Rated speed rpm : 1000

Del. quantity cm3/1000 strokes : 94.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +-3.5

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 4.50 Tolerance mm : \leftarrow 0.10

Del. quantity cm3/1000 strokes	:	26.0
Tolerance cm3/1000 strokes	: +-	2.5
Check tolerance cm3/1000s. Spreed	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 03.07.98 : ISO 4113

Combination No. : 0 402 046 873

Injection pump

Pump designation : PES6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1305227

Customer-spec. information Customer : DAF Motor : NS177M

Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0 40

Overflow valve : 1 417 413 000

1.5 Inlet press. bar : Tolerance bar : +- 0.1

Tolerance l/h: +- 10.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05 Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 : +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

: ← 0.10 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.25 Tolerance mm : + 0.05

Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Check tolerance cm3/1000s. : 12.0 Rack travel in mm : 11.25 Tolerance mm : + 1.30	Del. quantity cm3/1000 strokes : 149.5	Tolerance mm : + 0.25 Rated speed rpm : 1510
Check tolerance cm3/1000s. : + 4.0 GUIDE SLEEVE POSITION Spreed Check tolerance cm3/1000 strokes : 8.0 position degree : - 1 Rated speed rpm : 1360 Rated speed rpm : 325 FULL LOAD DELIVERY AT FULL LOAD STO Rack travel in mm : 4.40 Rated speed rpm : 1000 Aneroid pressure An		guide sleeve : 13.50
Tolerance		
cm3/1000 strokes : 8.0 position degree : - 1 Rated speed rpm : 1360 Check tolerance cm3/1000s. : 12.0 12.0 Rack travel in mm : 11.25 Tolerance mm : + 1.30 Rated speed rpm : 325 FULL LOAD DELIVERY AT FULL LOAD STO Rack travel in mm : 4.40 Rated speed rpm : 1000 Pol. quantity cm3/1000 strokes : 26.0 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 26.0 Del. quantity cm3/1000 strokes : 149.5 Check tolerance cm3/1000s : + 5.0 Tolerance cm3/1000 strokes : 149.5 Check tolerance cm3/1000s : + 5.0 Check tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s : 8.0 Tolerance cm3/1000 strokes : 8.0	Spreed	- + GOIDE SCEENE POSITION
Rack travel in mm : 11.25 Tolerance mm : + 1.30	cm3/1000 strokes : 8.0	position degree : - 1
Rack travel in mm : 4.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 26.0 Check tolerance cm3/1000 strokes : + 5.0 Spreed Tolerance cm3/1000 strokes : 4.0 Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 Tolerance cm3/		
Tolerance mm : + 0.10	Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 26.0 cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 CONTROL LEVER CONTRO		
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cm3/1000 strokes : + 2.5 Tolerance cm3/1000s. : + 5.0 Spreed cm3/1000s. : + 4.0 Tolerance cm3/1000s. : + 4.0 Tolerance cm3/1000 strokes : 4.0 Tolerance Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTINS OF INJECTION PUMP CONTROL LEVER GUIDE SLEEVE TRAVEL control lever Rated speed rpm : 1308 tolerance degree : 4.0 guide sleeve travel mm : 10.40 RATED SPEED Tolerance mm : + 0.15 rack travel mm : 11.25 Rated speed rpm : 325 Tolerance 1/min : + 5 guide sleeve check travel mm : + 0.20 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 10 Tolerance mm : + 0.25 rack travel mm : 4.00 Rated speed rpm : 1375 Tolerance 1/min : + 20 Rated speed rpm : 5.45 Tolerance 1/min : + 20 Rated speed rpm : 520 rack travel mm : 0.50 guide sleeve Tolerance mm : + 0.50	cm3/1000 strokes : 26.0	+ Del. quantity
Check tolerance cm3/1000s strokes : + 1.0 cm3/1000s. : + 5.0 check tolerance cm3/1000s. : + 4.0 check tolerance cm3/1000s. : + 4.0 check tolerance cm3/1000s strokes : 4.0 check tolerance cm3/1000 strokes : 4.0 check tolerance cm3/1000 strokes : 8.0 check tolerance cm3/1000s. : 8.0 check tolerance cm3/1000s. : 12.0 check tolerance cm3/1000s. : 4.0 check tolerance cm3/1000s. :		
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Spreed		
Check tolerance cm3/1000s. : 8.0 (B) SETTINS OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.25 Rated speed rpm : 1.25 Rated speed rpm : 1.25 guide sleeve travel mm : 1.25 Tolerance mm : + 0.20 Rated speed rpm : 868 Rated speed rpm : 375 guide sleeve travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520		
Check tolerance cm3/1000s. : 12.0 (B) SETTINS OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1308		
(B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1308		
## CONTROL LEVER CONTROL LEVER		
GUIDE SLEEVE TRAVEL Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Rated speed rpm : 325 Rated speed rpm : 325 Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : + 0.20 Rated speed rpm : 868 guide sleeve travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520 Rated speed rpm : 520 Rated speed rpm : 520 Rated speed rpm : 50.50 Rated speed rpm : 520		+
Rated speed rpm : 1308		CONTROL LEVER
Rated speed rpm : 1308 guide sleeve travel mm : 10.40 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 Guide sleeve travel mm : 1.25 Tolerance mm : + 0.20 Rated speed rpm : 868 Rated speed rpm : 1375 guide sleeve travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520	GUIDE SLEEVE TRAVEL	T control lever
guide sleeve travel mm : 10.40 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.25 Tolerance mm : + 0.20 Rated speed rpm : 868 Rated speed rpm : 4.00 Rated speed rpm : 868 Guide sleeve Tolerance mm : + 0.20 Rated speed rpm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 500 Tolerance mm : + 0.50 Rated speed rpm : 520 Tolerance mm : + 0.50 Rated speed rpm : 520 Tolerance mm : + 0.50	Detect around new 4700	
travel mm : 10.40 RATED SPEED Tolerance mm : + 0.15 rack travel mm : 11.25 Rated speed rpm : 1290 Tolerance 1/min : + 5 Check speed 1/min : + 10 Tolerance mm : + 0.20 Rated speed rpm : 868 Rated speed rpm : 1375 guide sleeve Tolerance 1/min : + 15 travel mm : 5.45 Tolerance 1/min : + 20 Rated speed rpm : 5.45 rack travel mm : + 20 Rated speed rpm : 520 rack travel mm : 0.50 guide sleeve Tolerance mm : + 0.50		+ tolerance degree : +- 4.U
Rated speed rpm : 325 Guide sleeve travel mm : 1.25 Rated speed 1/min : + 5 Check travel mm : + 0.20 Rated speed rpm : 868 Rated speed rpm : 4.00 Rated speed rpm : 5.45 Tolerance 1/min : + 15 Check Tolerance 1/min : + 15 Check Tolerance mm : + 0.25 Rated speed rpm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 5.05 Guide sleeve Rated speed rpm : 5.05 Tolerance mm : + 0.50 Rated speed rpm : 520 Rated speed rpm : 520 Tolerance mm : + 0.50	travel mm : 10.40	
Rated speed rpm : 325 guide sleeve Check travel mm : 1.25 Tolerance mm : + 0.20 Rated speed rpm : 868 guide sleeve - Rated speed rpm : 1375 travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520 guide sleeve - rack travel mm : 0.50 guide sleeve - Tolerance mm : + 0.50	Tolerance mm : +- 0.15	
travel mm : 1.25 speed 1/min : + 10 Tolerance mm : + 0.20 rack travel mm : 4.00 Rated speed rpm : 868 Rated speed rpm : 1375 guide sleeve Tolerance 1/min : + 15 travel mm : 5.45 Check Tolerance mm : + 0.25 speed 1/min : + 20 Rated speed rpm : 520 rack travel mm : 0.50 guide sleeve Tolerance mm : + 0.50		Tolerance 1/min : +- 5
Tolerance mm : + 0.20 Rated speed rpm : 868		
Rated speed rpm : 868		T speed (/imin : 10
guide sleeve travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520 guide sleeve Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 guide sleeve Tolerance mm : + 0.50		
travel mm : 5.45 Tolerance mm : + 0.25 Rated speed rpm : 520 guide sleeve Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50	The second secon	
Rated speed rpm : 520	travel mm : 5.45	+ Check
guide sleeve + Tolerance mm : + 0.50	Tolerance mm : +- 0.25	+ speed 1/min : +- 20
guide sleeve + Tolerance mm : + 0.50	Rated speed rpm : 520	rack travel mm : 0.50
travel mm : 3.02 + Rated speed rpm : 1500	guide sleeve	Tolerance mm : + 0.50
	travel mm : 3.02	+ Rated speed rpm : 1500

LOW IDLE

control lever

position degree : 76.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 225

CRT mm min. : > 5.90

Testing:

Rated speed rpin : 325 rack travel mm : 4.40 Tolerance mm : ← 0.10

Rated speed rpm : 375

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 12.25 Tolerance mm : + 0.05

Rated speed rpm : 700 rack travel mm : 12.25 Tolerance mm : + 0.10

Rated speed rpm : 1250 rack travel mm : 12.25 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600
Pressure hPa : 1500
rack travel mm : 12.25
Tolerance mm : + 0.05

Rated speed rpm : 600
Pressure hPa : rack travel mm : 7.00
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 600

Pressure hPa : 430 rack travel mm : 10.90 Tolerance mm : + 0.05

Pressure hPa : 220 rack travel mm : 7.85 Tolerance mm : +- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 153.0

Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

uneck tolerance

cm3/1000s. : +- 6.0

rack travel mm : 12.25
Tolerance mm : + 0.10

Aneroid pressure

Rated speed rpm : 1000 Del. quantity

cm3/1000 strokes : 92.0 Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.5

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 4.40
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 26.0
Tolerance
cm3/1000 strokes : + 2.5
Check tolerance
cm3/1000s. : + 5.0

cm3/1000s. : +
Spreed
Tolerance

Tolerance cm3/1000 strokes : 4.0 Check tolerance cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 03.07.98 : ISO 4113

Combination No. : 0 402 046 875

injection pump

Pump designation : PES6P110A320RS3329Z

EP type number : 0 412 016 744

Governor

Soverner design. : RQV325...1250PA1251

Governer no. : 0 421 814 164

Cust. part No. : 1309376/0

Customer-spec. information Customer : DAF : NS156M Motor Power KW : 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C 40 Tolerance °C : ← 2.0

Overflow valve : 1 417 413 000

1.5 Inlet press. bar : Tolerance bar : ← 0.1

Overflow quantity

min. l/h : 160 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : ← 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm :

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

: 5.25 Prestroke mm : +- 0.05 Tolerance mm Check tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

: +- 0.10 Tolerance

Check

tolerance °NW : \leftarrow 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85 Tolerance mm : $\leftarrow 0.05$

	+ guide sleeve
Del. quantity cm3/1000 strokes : 144.0	travel mm : 3.02 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1510 guide sleeve travel mm : 13.50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 1370 Rack travel in mm : 10.85
	Tolerance mm : +- 1.30
Rated speed rpm : 325	FULL LOAD DELIVERY AT FULL LOAD
Rack travel in mm : 4.50 Tolerance mm : +- 0.10 Del. quantity	Rated speed rpm : 1000 Aneroid pressure
cm3/1000 strokes : 26.0 Tolerance	hPa : 1500 Del. quantity
cm3/1000 strokes : +- 2.5 Check tolerance	cm3/1000 strokes : 144.0 Tolerance
cm3/1000s. : + 5.0 Spreed Tolerance	+ cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000S. : +- 4.0
cm3/1000 strokes : 4.0 Check tolerance	+ Spreed + Tolerance
cm3/1000s. : 8.0	cm3/1000 strokes : 8.0 Check tolerance
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ cm3/1000s. : 12.0
GUIDE SLEEVE TRAVEL	CONTROL LEVER
Rated speed rpm : 1298 guide sleeve	control lever position degree : 123.0 tolerance degree : + 4.0
travel mm : 10.25 Tolerance mm : +- 0.15	RATED SPEED
Rated speed rpm : 325 guide sleeve	rack travel mm : 10.85 Rated speed rpm : 1300 Tolerance 1/min : + 5
travel mm : 1.25 Tolerance mm : +- 0.20	Check speed 1/min : + 10
Rated speed rpm : 863 guide sleeve	rack travel mm : 4.00 Rated speed rpm : 1375
travel mm : 5.41 Tolerance mm : + 0.25	+ Tolerance 1/min : +- 15 + Check + speed 1/min : +- 20
Rated speed rpm : 520	rack travel mm : 0.50

STOP

Tolerance mm : ← 0.50 Rated speed rpm : 1500 Rated speed rpm : 600 Pressure hPa : 370 rack travel mm : 10.75 Tolerance mm : +- 0.05 LOW IDLE : 200 Pressure hPa rack travel mm : 8.40 Tolerance mm : + 0.10 control lever position degree : 76.0 tolerance degree : +- 4.0 FUEL DELIVERY CHARACTERISTICS Setting point w/out bumper spring Rated speed rpm : 225 Aneroid pressure : 1500 CRT mm min. : > 6.00 Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 145.0 Testing: Tolerance Rated speed rpm : 325 rack travel mm : 4.50 cm3/1000 strokes : + 3.0Check tolerance Tolerance mm : \leftarrow 0.10 cm3/1000s. : +- 6.0 Rated speed rpm : 375 rack travel mm : 11.85 Tolerance mm : + 0.10 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.85 Aneroid pressure Tolerance mm : \leftarrow 0.05 Rated speed rpm : 1000 Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 94.0 Tolerance cm3/1000 strokes : \div 1.0 Rated speed rpm : 1250 rack travel mm : 11.85 Check tolerance cm3/1000s. : +-3.5 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST LOW IDLE SETTING Rated speed rpm : 325 Rated speed rpm : 600 Pressure hPa : 1500 rack travel mm : 11.85 Rack travel in mm : 4.50 Tolerance mm : +- 0.10 Tolerance mm : + 0.05 Del. quantity cm3/1000 strokes : 26.0 Rated speed rpm : 600 Tolerance Pressure hPa cm3/1000 strokes : +- 2.5rack travel mm : 7.35 Check tolerance Tolerance mm : \leftarrow 0.20 cm3/1000s. : +- 5.0 Spreed **MEASUREMENT** Tolerance cm3/1000 strokes : 4.0

Check tolerance cm3/1000s.	:	8.0	
End of test specification sheet			

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.98 Test oil : ISO 4113

Combination No. : 0 402 046 876

Injection pump

Pump designation : PES6P110A320RS3329Y EP type number : 0 412 016 756

Governor

Governer design. : RQV325...12509A1251

Governer no. : 0 421 814 164

Cust. part No. : 1309375/0

Customer-spec. information Customer : DAF Motor : NS133M Power KW : 133.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 160
Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

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REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 11.85Tolerance mm : $\leftarrow 0.05$

	+ guide sleeve
Del. quantity	+ travel mm : 3.02
cm3/1000 strokes : 146.0	+ Tolerance mm : + 0.25
1,1000	1
Tolerance	Rated speed rpm : 1510
cm3/1000 strokes : +- 1.0	+ guide sleeve
CIIDA 1000 SELOKES . +- 1.0	
Charle dal anamas	
Check tolerance	+ Tolerance mm : + 0.50
$cin 3/1000$ S. : \leftarrow 4.0	†
Spreed	+ GUIDE SLEEVE POSITION
	+
Tolerance	+
cm3/1000 strokes : 8.0	+ control lever
	+ position degree : - 1
Check tolerance	+ Rated speed rpm : 1370
cm3/1000s. : 12.0	1
	Rack travel in mm: 10.85
	+ Tolerance mm : +- 1.30
	1 1000 41100 111111 1 1 1 1 1 1 1 1 1 1
Rated speed rpm : 325	
nated speed (Mill . 36)	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.50	LOFF FOUN DEFTACK! HI LOFF FOUN 210b
	Potential and address of the second
Tolerance mm : + 0.10	+ Rated speed rpm : 1000
Del quantity	+ Aneroid pressure
cm3/1000 strokes : 26.0	+ hPa : 1000
Tolerance	+ Del. quantity
cm3/1000 strokes : + 2.5	+ cm3/1000 strokes : 146.0
Check tolerance	+ Tolerance
$cm3/1000s.$: \leftarrow 5.0	+ cm3/1000 strokes : + 1.0
Spreed	+ Check tolerance
Tolerance	+ cm3/1000s. : $+$ 4.0
cm3/1000 strokes : 4.0	+ Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 8.0	+ cm3/1000 strokes : 8.0
CIID/ 10003 0.0	+ Check tolerance
(D) OFTENO OF THEFOTTON MIND	+ cm3/1000s. : 12.0
(B) SETTING OF INJECTION PUMP	T
WITH GOVERNOR	†
	+ CONTROL LEVER
GUIDE SLEEVE TRAVEL	†
	+ control lever
Rated speed rpm : 1298	+ position degree : 123.0
guide sleeve	+ tolerance degree : + 4.0
travel mm : 10.25	+
Tolerance mm : + 0.15	+ RATED SPEED
	+ rack travel mm : 10.85
Rated speed rpm : 325	+ Rated speed rpm : 1285
guide sleeve	+ Tolerance 1/min : +- 5
travel mm : 1.25	+ Check
Tolerance mm : +- 0.20	+ speed 1/min : +- 10
TOTAL THE THE TANK THE TOTAL THE TOT	T speed triming . T 10
Pated speed ppp . 947	T mark thought me / 00
Rated speed rpm : 863	rack travel mm : 4.00
guide sleeve	+ Rated speed rpm : 1360
travel mm : 5.41	+ Tolerance 1/min : + 15
Tolerance mm : + 0.25	+ Check
	+ speed 1/min : +- 20
Rated speed rpm : 520	+
	+ rack travel mm : 0.50

Tolerance mm Rated speed rpm	: ← 0.50 • 1500	Rated speed rpm : 600)
warea speed that	. 1700	Pressure hPa : 310	כ
		+ rack travel mm : 10.	
		+ Tolerance mm : +- 0.	
		+	_
OW IDLE		Pressure hPa : 130 rack travel mm : 7.) 05
		rack travel mm : 7. Tolerance mm : + 0.	ره. 10
control lever		Total lie min	. 10
osition degree	: 76.0	+	
olerance degree	: +- 4.0	+	
		+ FUEL DELIVERY CHARACTERIST	ΓIC
etting point w/o	out bumper spring	İ	
lated speed rpm	: 225	Aneroid pressure	
		1 - 4000)
RT mm min.	: > 6.00	+ hPa : 1000 + Rated speed rpm : 700)
		→ Del. quantity	
esting:		+ cm3/1000 strokes : 147	1.5
عجن ليمتعو الاحظم	. 725	Tolerance	2 ^
ated speed rpm	: 363 • 450	+ cm3/1000 strokes : + 3 + Check tolerance	J.U
ack travel mm olerance mm	: 4.50 : +- 0.10	+ cneck toterance + cm3/1000s. : +- 6	ሩ በ
CCC CONCC IIII	0.10	- 0110/10003	,. U
ated speed rpm	: 375	+	
•		† rack travel mm : 11.	
		Tolerance mm : + 0.	.10
ORQUE CONTROL	. 4000	†	
ated speed rpm ack travel mm	: 1000 • 11 85	I Approved processing	
ack travet mm olerance mm	· +- 0.05	+ Aneroid pressure + hPa : -	-
ocetatice inti	0.05	Rated speed rpm : 1000)
ated speed rpm	: 700	+ Del. quantity	•
ack travel mm	: 11.85	+ cm3/1000 strokes : 83	3.0
olerance mm	: +- 0.10	+ Tolerance	
	4055		1.0
ated speed rpm	: 1250	+ Check tolerance	
	: 11.85	+ cm3/1000s. : +- 3	5.5
olerance mm	: 0.10	Ī	
		-	
NEROID/ALTITUDE		+	
OMPENSATOR TEST		†	
		LOW IDLE	
ETTING		+	-
ated apped	: 600	Rated speed rpm : 325)
ated speed rpm ressure hPa	: 1000	Rack travel in mm: 4.	รก
ack travel mm		Tolerance mm : + 0.	
olerance mm		+ Del. quantity	
	- 		5.0
ated speed rpm	: 600	+ Tolerance	
ressure hPa	: -	+ cm3/1000 strokes : +- 2	2.5
ack travel mm	: 6.50	+ Check tolerance	
olerance mm	: ← 0.20	1	5.0
ACUMENT		+ Spreed	
EASUREMENT		Tolerance cm3/1000 strokes : 4	4.0
		T CHIST LOUD STROKES: 4	٠. ں

Check tolerance cm3/1000S.	:	8.0	
			
End of test spec	ifica	tion sheet	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 03.07.98 Test oil : US. U7. 98

Combination No. : 0 402 046 881

Injection pump

Pump designation : PES6P110A320RS3329 EP type number : 0 412 016 743

Governor

Governer design. : RQ325...1250PA1370

Governer no. : 0 421 801 828

Cust. part No. : 1305236

Customer-spec. information

Customer : DAF

Motor : NS177M Power KW : 177.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 000

Inlet press. bar :

Tolerance bar : +- 0.1

Overflow quantity

min. L/h : 140 Tolerance L/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

x length mm : 600

x inside diameter: 6.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Test lines : 1 680 750 008

Outside diameter : 2.0

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance $^{\circ}NW$: + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 12.25

Tolerance mm : + 0.05

		+ guide sleeve
Del. quantity		+ travel mm : 3.48
cm3/1000 strokes	: 149.5	+ Tolerance mm : + 0.10
01157 1000 Strokes	. 147.3	
Tolerance		Rated speed rpm : 590
	: +- 1.0	
cm3/1000 strokes	: +- 1.0	+ guide sleeve
		+ travel mm : 6.00
Check tolerance		Tolerance mm : + 0.10
cm3/1000s.	: +- 4.0	†
	***************************************	+ Rated speed rpm : 1460
Spreed		+ guide sleeve
		† travel mm : 11.50
Tolerance		+ Tolerance mm : +- 0.50
cm3/1000 strokes	: 8.0	+
Check tolerance		+ GUIDE SLEEVE POSITION
cm3/1000s.	: 12.0	
		1
	***************************************	control lever
		position degree : 109
Pated speed ppm	: 325	T position degree . 109
Rated speed rpm	: 325	T aandmal lawan
On the American Service		+ control lever
Rack travel in mm		position degree : 109
Tolerance mm	: +- 0.10	+ Rated speed rpm : 600
Del. quantity		†
cm3/1000 strokes	: 26.0	+ Rack travel in mm : 20.00
Tolerance		+ Tolerance mm : +- 0.80
cm3/1000 strokes	: +- 3.0	+
Check tolerance		<u> </u>
cm3/1000S.	: +- 6.0	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed		
Tolerance		+ Rated speed rpm : 1000
cm3/1000 strokes	: 4.0	+ Aneroid pressure
Check tolerance		+ hPa : 1500
cm3/1000s.	: 8.0	+ Del. quantity
		- cm3/1000 strokes : 149.5
		+ Tolerance
(B) SETTING OF IN.	IFCTTON PLIMP	+ cm3/1000 strokes : +- 1.0
WITH GOVERNOR	CC11014 1014	- Check tolerance
MITH GOVERNOR		
		1
CHASE SHEETE TRAVE	-1	+ Spreed
GUIDE SLEEVE TRAVE	<u> </u>	- Tolerance
6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4202	+ cm3/1000 strokes : 8.0
Rated speed rpm	: 1292	Check tolerance
guide sleeve		+ cm3/1000s. : 12.0
travel mm	: 6.37	†
Tolerance mm	: +- 0.15	†
	-	
Rated speed rpm	: 325	+ CONTROL LEVER
guide sleeve		+
travel mm	: 1.99	- control lever
Tolerance mm	: +- 0.20	position degree : 97.0
		tolerance degree : + 4.0
Rated speed rpm	: 1000	1
guide sleeve	-	+ RATED SPEED
travel mm	: 6.00	+ rack travel mm : 11.25
Tolerance mm	: + 0.10	Rated speed rpm : 1290
		+ Tolerance 1/min : + 5
Rated speed rpm	: 426	Check
water sheer i bill	• 720	1
		+ speed 1/min : + 10

4.00 rack travel mm : Rated speed rpm : 1370 Tolerance 1/min : + 15 Check speed 1/min : ← 20 Rated speed rpm : 1500 LOW IDLE control lever position degree : 75.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 225 CRT mm min. : > 6.00Testina: Rated speed rpm : 325 rack travel mm : 4.4 4.40 Tolerance mm : +- 0.10 rack travel mm : 2.00 Rated speed rpm : 415 Tolerance 1/min : + 20 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 12.25 Tolerance mm : +- 0.05 Rated speed rpm : 1250 rack travel mm : 12.25 Tolerance mm : + 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 600 Pressure hPa : 1500 rack travel mm : 12.25 : +- 0.05 Tolerance mm

Pressure hPa rack travel mm : 7.00 : +- 0.20 Tolerance mm **MEASUREMENT** Rated speed rpm : 600 430 Pressure hPa rack travel mm : 10.90 Tolerance mm : +- 0.05 : 220 Pressure hPa rack travel mm : 8.10 Tolerance mm : → 0.10 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 92.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 LOW IDLE Rated speed rpm : 325 4.40 Rack travel in mm : Tolerance n_m : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 26.0

Rated speed rpm : 325

Rack travel in mm : 4.40
Tolerance nm : 4-0.10
Del. quantity
cm3/1000 strokes : 26.0
Tolerance
cm3/1000 strokes : 4-3.0
Check tolerance
cm3/1000s. : 4-6.0
Spreed
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

End of test specification sheet

Rated speed rpm : 600

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 07.07.98 Test oil : ISO 4113

Combination No. : 0 402 076 821

Injection pump

Pump designation : PES6P120A720RS3340 EP type number : 0 412 026 773

Governor

Governer design. : RSV650...1050P8A566

: ન્6

Governer no. : 0 421 833 615

Cust. part No. :

Customer-spec. information

Customer : NH

Motor : EP 040 B Power KW : 213.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 086

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 110 Tolerance L/h : + 20.0

Test nozzle holde

assembly : 1 688 901 103

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.60
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.30

Barrel no. : 1

BASIC SETTING

+	governor spring
Rated speed rpm : 1025	pre-tension
<u> </u>	click setting x : 2.50
Rack travel in mm: 13.35	
Tolerance mm : + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity	Rated speed rpm : 1025
cm3/1000 strokes : 204.0	Aneroid pressure
Toloronon †	hPa : 1700
Tolerance + cm3/1000 strokes : +- 1.0 +	Del. quantity cm3/1000 strokes : 204.0
<u> </u>	Tolerance
Check tolerance + 6.0 + 6.0	cm3/1000 strokes : +- 1.0 Check tolerance
5/10/10003 += 0.0	cm3/1000s. : +- 6.0
Spreed	Spreed
Talamana	Tolerance
Tolerance + cm3/1000 strokes : 5.0 +	cm3/1000 strokes : 5.0 Check tolerance
<u> </u>	cm3/1000s. : 9.0
Check tolerance	
cm3/1000s. : 9.0	
+	CONTROL LEVER
Rated speed rpm : 650 +	control lever
rated speed (piii . 050	position degree : 93.0
Rack travel in mm: 4.70	tolerance degree : +- 4.0
Tolerance mm : + 0.10	
Del. quantity cm3/1000 strokes : 23.0 +	ASSEMBLY GOVERNOR SETTING
Tolerance +	
cm3/1000 strokes : + 3.0	Rated speed rpm : 1067 rack travel mm : 12.30
Check tolerance cm3/1000s. : + 6.0	rack travel mm : 12.30
Spreed +	Rated speed rpm : 1097
Tolerance	Tolerance 1/min : + 5
cm3/1000 strokes : 8.0	rack travel mm : 4.00
Check tolerance + cm3/1000s. : 12.0 +	rack travel mm · 0.85
. ,2.0	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1300
(0)	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP + WITH GOVERNOR +	
42111 0012111011	Rated speed rpm : 1068
+	Rated speed rpm : 1068 rack travel mm : 12.30
GUIDE SLEEVE POSITION	Rated speed rpm : 1098
Solve Seeeve Position	Tolerance 1/min : +- 5
· · · · · · · · · · · · · · · · · · ·	rack travel mm : 4.00
control lever	nack though mm . O. O.
position degree : -3 + Rated speed rpm : 800 +	rack travel mm : 0.85 Tolerance mm : +- 0.55
+	
Rack travel in mm: 0.50	Dated aread non
Tolerance mm : +- 0.20	Rated speed rpm : 1069 rack travel mm : 12.30
Ţ.	, and craffee min . IE. JU
\	Rated speed rpm : 1099

Tolerance 1/min : +- 5	+ Rated speed rpm : 720
rack travel mm : 4.00	İ
rack travel mm : 0.85	TORQUE CONTROL
Tolerance mm : + 0.55	+ Rated speed rpm : 1025
	rack travel mm : 13.35
	+ Tolerance mm : $+$ 0.05
Rated speed rpm : 1070 rack travel mm : 12.30	
rack travel mm : 12.30	Rated speed rpm : 750
1 4011 - 1 4100	rack traval mm : 1/ 00
Rated speed rpm : 1100	Rated speed rpm : 750 rack travel mm : 14.00 Tolerance mm : + 0.10
Talanana 1/nin	T roterance man . += 0.10
Tolerance 1/min : + 5	T
rack travel mm : 4.00	+ Rated speed rpm : 650
	+ rack travel mm : 14.05
rack travel mm : 0.85	+ Talerance mm : + 0.15
rack travel mm : 0.85 Tolerance mm : + 0.55	+
	<u> </u>
	+ ANEROID/ALTITUDE
Rated speed rpm : 1071	+ COMPENSATOR TEST
rack travel mm : 12.30	
TOOK CLOVEC HAIL . TE SO	T
Datad aread are . 1101	I SETTING
Rated speed rpm : 1101	+ 2E11TIAG
Tolerance 1/min : +- 5	†
rack travel mm : 4.00	Rated speed rpm : 500 Pressure hPa : 1700
	+ Pressure hPa : 1700
rack travel mm : 0.85 Tolerance mm : + 0.55	rack travel mm : 14.00 Tolerance mm : + 0.15
Tolerance mm : +- 0.55	+ Tolerance mm : +- 0.15
	_
	Rated speed rpm · 500
Rated speed rpm : 1072	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 7.90
rack travel mm : 12.30	T Fressule life . 7.00
rack travel mm : 12.30	rack travel mm : 7.90
	Tolerance mm : + 0.15
Rated speed rpm : 1102	+
Tolerance 1/min : +- 5	+ MEASUREMENT
rack travel mm : 4.00	+
	Rated speed rpm : 500
rack travel mm : 0.85	+
rack travel mm : 0.85 Tolerance mm : +- 0.55	Pressure hPa : 980
1 3 5 5 1 Mills 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	rack travel mm : 12 25
	rack travel mm : 12.25 Tolerance mm : +- 0.10
LOW IDLE	Total ance min . Total
LOW TOLE	T
	Charl data de la la la la la la la la la la la la la
nambra I. Javan	+ Start interlock
control lever	†
position degree : 74.0	+ Rated speed rpm : > 100
tolerance degree : +- 4.0	+
	+ Check
Setting point w/out bumper spring	+ speed 1/min : > 80
	+
Rated speed rpm : 650	
rack travel mm : 4.20	→ FUEL DELIVERY CHARACTERISTICS
rack travel mm : 4.20 Tolerance mm : +- 0.10	1
Testing:	Aneroid pressure
······································	hPa : 1700
Rated speed rpm : 650	Rated speed rpm : 750
mack that all mm · / 70	, , , , , , , , , , , , , , , , , , ,
rack travel mm : 4.70 Tolerance mm : +- 0.10	Del. quantity
roterance min : +- U.IU	cm3/1000 strokes : 230.0
2.00	Tolerance
rack travel mm : 2.00	+ cm3/1000 strokes : +- 3.0

cm3/1000s.	: 6.0	
rack travel mm Tolerance mm	: 14.05 : ← 0.15	
Aneroid pressure		
hPa Rated speed rpm	500	
Del. quantity cm3/1000 strokes	: 86.0	
Tolerance cm3/1000 strokes Check tolerance	: ← 1.0	
cm3/1000s.	: +- 4.0	
STARTING FUEL DELI		· · · · -
Rated speed rpm	: 100	
rack travel mm Tolerance mm	: 20.50 : +- 0.50	
Del. quantity cm3/1000 strokes	: 135.0	
Tolerance cm3/1000 strokes	: +- 15.0	
Check tolerance cm3/1900s.	: +- 19.0	
LOW IDLE		
Rated speed rpm	: 650	
Rack travel in mm Tolerance mm Del. quantity	: 4.70 : + 0.10	
cm3/1000 strokes Tolerance	: 23.0	
cm3/1000 strokes Check tolerance	: +- 3.0	
cm3/1000s. Spreed Tolerance	: +- 6.0	
cm3/1000 strokes Check tolerance	: 8.0	
cm3/1000s.	: 12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 02.07.98 Edition : 02.07.98 Test oil : ISO 4113

Combination No. : 0 402 086 705

Injection pump

Pump designation : PES6P100B321RS3388 EP type number : 0 412 006 714

Governor

Governer design. : RSV400...1125P0A694

Governer no. : 0 421 833 617

Cust. part No. : 51.11103-7606

Customer-spec. information

Customer : MAN

Motor : D0826 LE527 Power KW : 169.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 150
Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : + 1.5

F07

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 3.30 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 13.50Tolerance mm : $\leftarrow 0.50$

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Start of delivery blocking

Tolerance : +- 0.10

Check

tolerance °NW

: **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 925

Rack travel in mm Tolerance mm	: 13.90 : +- 0.05
Del. quantity cm3/1000 strokes	: 169.0
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: + 4.0
Spreed	
Tolerance cm3/1000 strokes	: 4.0
Check tolerance cm3/1000s.	: 6.0
Rated speed rpm	: 400
Rack travel in mm Tolerance mm	: 4.30 : +- 0.10
Del. quantity cm3/1000 strokes	: 25.0
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s. Spreed	: ← 6.0
Tolerance cm3/1000 strokes	: 3.5
Check tolerance cm3/1000s.	: 5.5
CHIST TOOUS.	
(B) SETTING OF IN. WITH GOVERNOR	JECTION PUMP
GUIDE SLEEVE POSIT	TION
control lever position degree Rated speed rpm	: - 3 : 800
Rack travel in mm Tolerance mm	: 0.50 : + 0.20
governor spring pre-tension click setting x	: 5.50

FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure hPa	: 925 : 1500
Del. quantity cm3/1000 strokes	: 169.0
Tolerance cm3/1000 strokes Check tolerance	: + 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes Check tolerance	: 4.0
cm3/1000s.	: 6.0
CONTROL LEVED	
CONTROL LEVER	
control lever position degree tolerance degree	: 104.4 : +- 4.0
RATED SPEED rack travel mm	: 12.10
Rated speed rpm Tolerance 1/min	: 1175 : +- 5
rack travel mm Rated speed rpm	: 4.00 : 1260
Tolerance 1/min	: + 15
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : + 0.55 : 1400
rack travel mm Rated speed rpm Tolerance 1/min	: 4.00 : 1265 : +- 15
LOW IDLE	

control lever position degree tolerance degree	:	80.0 ← 4.0
Setting point w/or	ut	bumper spring
Rated speed rpm rack travel mm Tolerance mm	:	400 4.30 +- 0.10

Testing:

Rated speed rpm	:	400
rack travel mm	:	4.80
Tolerance mm	: +	- 0.10

rack travel mm	:	2.00
Rated speed rpm	:	500
Tolerance 1/min	: +	- 30

TORQUE CONTROL

Rated speed rpm	:	925
rack travel mm	:	13.90
Tolerance mm	: +	- 0.05

Rated speed rpm	:	1125
rack travel mm	:	13.10
Tolerance mm	: +	→ 0.10

Rated speed rpm	:	700
rack travel mm	:	14.00
Tolerance mm	: +	- 0.10

Rated speed rpm	:	1000
rack travel mm	:	13.70
Tolerance mm	: +	─ 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1500
rack travel mm	:	14.00
Tolerance mm	: -	← 0.10

Rated speed rpm	:	500
Pressure hPa	:	_
rack travel mm	:	9.50
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated speed	rpm	:	500
-------------	-----	---	-----

Pressure hPa	:	150
rack travel mm	:	10.00
Tolerance mm	: +	- 0.05

Pressure hPa	:	800
rack travel mm	:	13.20
Tolerance mm	: +	- 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure			
hPa	:	1	500
Rated speed rpm	:	1	125
Del. quantity			
cm3/1000 strokes	:		146.5
Tolerance			
cm3/1000 strokes	:	+-	3.0
Check tolerance			

	
A 21	

cm3/1000s. : +- 6.0

MIELOID PLESSUIE		
hPa	:	1500
Rated speed rpm	:	700
nack though mm		1/. 0

Rated speed rpm	:		700
rack travel mm	:		14.00
Tolerance mm	• :	+-	0.10
Del. quantity			

cm3/1000 strokes : 184.0 Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

cm3/1000s. : +- 6.0

Aneroid pressure

hPa	:	-
Rated speed rpm	:	500
Del. quantity		

cm3/1000 strokes : 90.0

Tolerance

cm3/1000 strokes : +- 1.0 Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm	:	100
rack travel mm	:	9.50
Tolerance mm	: +	- 0.20
Del. quantity		
cm3/1000 strokes	:	112.0
Tolerance		
cm3/1000 strokes	: +	- 10.0
Check tolerance		
cm3/1000s.	: +-	- 14.0

LOW IDLE

Rated speed rpm : 400

Rack travel in mm : 4.80 Tolerance mm : +- 0.10

Del. quantity cm3/1000 strokes	:	25.0
Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000S.	·: +-	6.0
Spreed Tolerance cm3/1000 strokes	•	3.5
Check tolerance cm3/1000s.	:	5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 06.07.98 Test oil : U6.U7.98

Combination No. : 0 402 646 649

Injection pump

Pump designation : PE6P130A720RS7339 EP type number : 0 412 636 833

Governor

Governor design. : RQV390...950PA905-1

Governer no. : 0 421 814 097

Cust. part No. :

Customer-spec. information

Customer : IVECO-AIFO

Motor : 8210.SRI Power KW : 353.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5
Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

Tolerance bar : +- 1.5

: 208.5

Test lines : 1 680 750 075

Outside diameter : 8.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0

Tolerance bar : \leftarrow 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 14.00

Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-50-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

tolerance $^{\circ}NW$: \leftarrow 0.40

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm: 13.95

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 338.0

	+ Rated speed rpm : 720
Tolerance -	duide sleeve
cm3/1000 strokes : +- 1.0	+ travel mm : 4.94
-	Tolerance mm : + 0.25
Check tolerance	1 Total area min
cm3/1000s. : +- 4.0	Rated speed rpm : 1260
CIII37 (0003 4.0	quide sleeve
Canad	
Spreed -	travel mm : 11.50
- 	Tolerance mm : + 0.50
Tolerance -	†
cm3/1000 strokes : 8.0 -	
	GUIDE SLEEVE POSITION
Check tolerance -	†
cm3/1000s. : 12.0 -	Rated speed rpm : 1090
-	†
-	Rack travel in mm : 12.90
•	+ Tolerance mm : +- 1.30
Rated speed rpm : 300 -	+
-	
Rack travel in mm : 4.70 -	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : + 0.10 -	+
Del. quantity -	Rated speed rpm : 950
cm3/1000 strokes : 24.0	Aneroid pressure
Tolerance	hPa : 1000
cm3/1000 strokes : +- 3.0	Del. quantity
Check tolerance -	cm3/1000 strokes : 338.0
cm3/1000s. : +- 7.0	Tolerance
Spreed	cm3/1000 strokes : +- 1.0
Tolerance -	+ Check tolerance
cm3/1000 strokes : 6.0 -	+ cm3/1000s. : +- 4.0
Check tolerance	- Spreed
cm3/1000s. : 10.0 -	+ Tolerance
	cm3/1000 strokes : 8.0
	Check tolerance
(B) SETTING OF INJECTION PUMP	1
WITH GOVERNOR -	- cm3/1000s. : 12.0
WITH GOVERNOR -	Ť
	Ť
CUIDE OF FIVE TOAVEL	CONTROL LEVER
GUIDE SLEEVE TRAVEL -	CONTROL LEVER
Datad anad was 1000	
Rated speed rpm : 1000 -	control lever
guide steeve	position degree : 114.0
travel mm : 7.75 -	tolerance degree : +- 4.0
Tolerance mm : +- 0.15 -	†
	RATED SPEED
Rated speed rpm : 300 -	rack travel mm : 12.90
guide sleeve -	Rated speed rpm : 995
travel mm : 1.81 -	Tolerance 1/min : +- 5
Tolerance mm : + 0.20 -	+
-	+ rack travel mm : 4.00
Rated speed rpm : 409 -	Rated speed rpm : 1115
guide sleeve -	Tolerance 1/min : +- 15
travel mm : 2.86 -	+
Tolerance mm : +- 0.25	rack travel mm : 0.50
-	Tolerance mm : + 0.50
Rated speed rpm : 459	Rated speed rpm : 1200
guide sleeve	+
travel mm : 3.29	+
Tolerance mm : + 0.25	+

LOW IDLE

control lever

position degree : 65.0 tolerance degree : +- 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : > 6.20

Testina:

rack travel mm : 4.7 4.70 : **←** 0.10

Rated speed rpm : 430

TORQUE CONTROL

Rated speed rpm : 950 rack travel mm : 13.95 Tolerance mm : **←** 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500 Pressure hPa : 1000 rack travel mm : 13.95 Tolerance mm : + 0.05

: 500 Raited speed rpm Pressure hPa : 10.25 rack travel mm Tolerance mm : **←** 0.15

MEASUREMENT

Rated speed rpm 500

Pressure hPa 350 rack travel mm 10.75 : + 0.10 Tolerance mm

Pressure hPa : rack travel mm : 520 12.95 Tolerance mm : +- 0.05

Start interlock

Rated speed rpm : > 100

Check

speed 1/min : > 80

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 500 Rated speed rpm :

Del. quantity

cm3/1000 strokes : 196.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : ← 4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max.

control lever setting.

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 4.70 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 24.0 Tolerance

cm3/1000 strokes : +- 3.0 Check tolerance

cm3/1000s. Spreed

Tolerance

: +- 7.0

cm3/1000 strokes : 6.0 Check tolerance

cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 07.07.98 Test oil : ISO 4113

Combination No. : 0 402 646 681

Injection bumb

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Soverner design. : RGV275...1000FA1381K

Governer no. : 0 421 815 561

Cust. part No. : 1349846/0

Customer-spec. information Customer : DAF : XF 250 Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

208.5 har Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter: 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Rack travel in mm: 11.50 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance °NW

Start of delivery mark

Tolerance : ← 0.10

Check

tolerance $^{\circ}NW$: \leftarrow 0.70

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm: 11.35 Tolerance mm : \leftarrow 0.10

Del. quantity cm3/1000 strokes : 245.0

F15

		+ Rated speed rpm : 1282
Tolerance		+ guide sleeve
cm3/1000 strokes	: ← 1.0	travel mm : 12.00
		+ Tolerance mm : ← 0.25
Check tolerance		+
cm3/1000s.	: ← 4.0	+ Rated speed rpm : 1370
Spreed		+ guide sleeve + travel mm : 13.50
Spreed		+ Tolerance mm : +- 0.50
Tolerance		Totel and min
cm3/1000 strokes	: 5.0	
		↓ GUIDE SLEEVE POSITION
Check tolerance		+
cm3/1000s.	: 9.0	Rated speed rpm : 1263
		10.50
•		+ Rack travel in mm: 10.50
Rated speed rpm	· 275	† Tolerance mm : +- 1.30
nated speed the		
Rack travel in mon	: 5.20	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm		+
Del. quantity		+ Rated speed rpm : 980
cm3/1000 strokes	: 13.5	+ Aneroid pressure
Tolerance cm3/1000 strokes	7.0	+ hPa : 1500
Check tolerance	. +- 3.0	+ Del. quantity + cm3/1000 strokes : 245.0
cm3/1000s.	: +- 6.0	Tolerance
Spreed		+ cm3/1000 strokes : + 1.0
Tolerance		- Check tolerance
cm3/1000 strokes	: 8.0	+ cm3/1000s. : $+$ 4.0
Check tolerance		+ Spreed
cm3/1000s.	: 12.0	+ Tolerance
		+ cm3/1000 strokes : 5.0 + Check tolerance
(B) SETTING OF INJ	ECTTON PLIMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	2012011 1 011	
		+
GUIDE SLEEVE TRAVE	L	+ CONTROL LEVER
Rated speed rpm	: 1055	† control lever
guide sleeve	. 10,5	position degree : 110.0
travel mm	: 7.47	+ tolerance degree : +- 4.0
Tolerance mm	: ← 0.15	+
	275	+ RATED SPEED
•	: 275	+ rack travel mm : 10.50
guide sleeve travel mm	: 2.04	+ Rated speed rpm : 1045 + Tolerance 1/min : +- 5
Tolerance mm	: + 0.20	+ Tolerance 1/min : +- 5 + Check
rocerance man	. , 0.20	speed 1/min : +- 10
Rated speed rpm	: 820	+
guide sleeve		rack travel mm : 4.00
travel mm	: 5.14	Rated speed rpm : 1130
Tolerance mm	: ← 0.25	+ Tolerance 1/min : + 15
Datad anasal unu	. /90	+ Check
Rated speed rpm guide sleeve	: 480	+ speed 1/min : +- 20
travel mm	: 3.34	rack travel mm : 0.70
	: + 0.25	+ Tolerance mm : +- 0.70
		+ Rated speed rpm : 1275
		•

LOW IDLE control lever position degree : 74.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 175 CRT mm min. : > 8.30 Testing: Rated speed rpm : 275 rack travel mm : 5.20 : **←** 0.10 Tolerance mm Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 980 rack travel mm : 11.3 11.35 Tolerance mm : +- 0.10 Rated speed rpm : 900 rack travel mm : 11.50 Tolerance mm : + 0.10 Rated speed rpm : 750 rack travel mm : 11.85 : **+-** 0.05 Tolerance mm Rated speed rpm : 700 rack travel mm : 11.75 : +- 0.10 Tolerance mm Rated speed rpm : 600 rack travel mm : 11.30 Tolerance mm : + 0.10 Rated speed rpm : 500 rack travel mm : 10.90 Tolerance mm : +- 0.10 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 775 Pressure hPa : 1500

rack travel mm	: 11.85
Tolerance mm	: + 0.10
Rated speed rpm	: 775
Pressure hPa	: 460
rack travel mm	: 11.00
Tolerance mm	: + 0.05
MEASUREMENT	
Rated speed rpm	: 775
Pressure hPa	: -
rack travel mm	: 8.30
Tolerance mm	: + 0.10
Pressure hPa	: 250
rack travel mm	: 9.30
Tolerance mm	: + 0.10

rack travel mm Tolerance mm	: + 0.10
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	
hPa	: 1500
Rated speed rpm	: 750
rack travel mm	: 11.85
Tolerance mm	: ← 0.05
Del. quantity cm3/1000 strokes	. 207.0
Tolerance	: 283.0
cm3/1000 strokes	: +- 2.0
Check tolerance	. , 2.0
cm3/1000s.	: +- 5.0
Spreed	
Tolerance	
cm3/1000 strokes	: 10.0
Check tolerance	
cm3/1000s.	: 15.0
Aneroid pressure	
hPa	: -
Rated speed rpm	: 600
Del. quantity cm3/1000 strokes	: 188.0
Tolerance	. 100.0
cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000s.	: +- 4.0
Spreed	
Tolerance	
cm3/1000 strokes	: 10.0
Check tolerance cm3/1000s.	: 15.0

LOW IDLE

Rated speed rpm	:		275	
Rack travel in mm Tolerance mm	-		5.20 0.10	
Del. quantity	•	•	0. 10	
J. 1000 DET DITES	:		13.5	
Tolerance cm3/1000 strokes		_	3.0	
Check tolerance	•	_	3.0	
cm3/1000s.	:	+-	6.0	
Spreed				
Tolerance cm3/1000 strokes	•		8.0	
Check tolerance	•		0.0	
cm3/109Gs.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 07.07.98 : ISO 4113

Combination No. : 0 402 646 706

Injection pump

Pump designation : PE6P120A320LS7929 EP type number : 0 412 626 978

Governor

Governer design. : R@300/1050P#1395

Governer no. : 0 421 801 837

Cust. part No. : 0280745602

Customer-spec. information

Customer : MB-NFZ

Power KW : OM441LA - EURO I

: 218.0

TEST BENCH REQUIREMENTS

Test cil inlet

temp. °C : 40
Tolerance °C : + 2.0 temp. °C 40

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : +-0.1

Tolerance l/h: \leftarrow 5.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 075

Outside diameter :

8.0

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.00 Tolerance im : - 1.00

Firing order : 6- 3- 5- 2- 4-

Phasing : 0- 60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.30 Tolerance mm : \leftarrow 0.10

Del. quantity + cm3/1000 strokes : 197.0 +	
	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1158
Check tolerance cm3/1000s. : +- 2.0	Rack travel in mm : 11.00 Tolerance mm : +- 1.30
Spreed	
Tolerance +	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 5.0	Rated speed rpm : 1050 Aneroid pressure
Check tolerance cm3/1000s. : 9.0	hPa : 1000 Del. quantity
	cm3/1000 strokes : 197.0 Tolerance
-	cm3/1000 strokes : +- 1.0
Rack travel in mm : 6.00	Check tolerance cm3/1000s. : +- 2.0
Tolerance mm : + 0.10	Spreed
+	Tolerance
(D) SETTING OF THE SETTION DIME	cm3/1000 strokes : 5.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Check tolerance cm3/1000s. : 9.0
+	. ,.0
GUIDE SLEEVE TRAVEL	
+	CONTROL LEVER
Rated speed rpm : 1108	
guide steeve + travel mm : 6.38 +	control lever position degree : 92.0
Tolerance mm : + 0.15	tolerance degree : + 4.0
+	-
Rated speed rpm : 300	RATED SPEED
guide sleeve + travel mm : 1.70 +	rack travel mm : 11.30 Rated speed rpm : 1100
Tolerance mm : + 0.20	Tolerance 1/min : +- 5
+	
Rated speed rpm : 1050	rack travel mm : 4.00
guide sleeve + travel mm : 6.00 +	Rated speed rpm : 1175 Tolerance 1/min : +- 10
Tolerance mm : +- 0.10	Toterance Trimiti
+	rack travel mm : 0.85
Rated speed rpm : 415 +	Tolerance mm : + 0.55
guide sleeve + travel mm : 4.47 +	Rated speed rpm : 1300
Tolerance mm : + 0.10	
+	
Rated speed rpm : 510	1000
guide sleeve + travel mm : 6.00 +	LOW IDLE
travel mm : 6.00 + Tolerance mm : +- 0.10 +	
T	control lever
Rated speed rpm : 1280	position degree : 73.0
guide sleeve	tolerance degree : +- 4.0
travel mm : 11.50 + Tolerance mm : +- 0.50 +	Satting point Wort human aprica
TO CET OF THE THE THE TENT OF	Setting point w/out bumper spring

Rated speed rpm	. 200	Ī
CRT mm min.	: > 8.20	+ Aneroid + hPa
Testing:		+ Rated spe
Rated speed rpm	: 300	+ Del. quar + cm3/1000
rack travel mm	: 6.00	+ Tolerance
Tolerance mm	: ← 0.10	+ cm3/1000
rack travel mm	: 2.00	+ Check to + cm3/1000:
Rated speed rpm		Spreed
Tolerance 1/min		+ Tolerance
		+ cm3/1000
TORQUE CONTROL		+ Check to + cm3/1000:
Rated speed rpm	: 1050	† cup, 1000;
rack travel mm	: 12.30	+
Tolerance mm	: ← 0.10	+ rack trav
Rated speed rpm	: 600	+ Tolerance
rack travel mm	: 12.30 : + 0.20	+
Tolerance mm	: ← 0.20	+ Aneroid
Rated speed rpm	: 1050	+ hPa + Rated spe
rack travel mm	: 12.55	+ Del. quar
Toterance mm	: ← 0.05	+ cm3/1000
		+ Tolerance
ANEROID/ALTITUDE		+ cm3/1000 + Check to
COMPENSATOR TEST		c:n3/1000:
		+ Spreed
SETTING		+ Tolerance
2C1 ITIAG		+ cm3/1000
Rated speed rpm	: 500	+
Pressure hPa	: 1000	CTARTANG
rack travel mm Tolerance mm	: 12.30 : +- 0.10	STARTING
CO1 CM 100 1/8//		Rated spe
Rated speed rpm	: 500	Del. quar
Pressure hPa rack travel mm	: 10.20	+ cm3/1000 + Tolerance
Tolerance mm	: + 0.10	+ cm3/1000
-		+ Check to
MEASUREMENT		± cm3/1000
Rated speed rpm	: 500	+
Pressure hPa	: 350	I
rack travel mm	: 10.60	+ LOW IDLE
Tolerance mm	: ← 0.05	<u>†</u>
Pressure hPa	: 600	Rack trav
rack travel mm	: 11.80	Tolerance
Tolerance mm	: +- 0.10	<u>†</u>
		Ţ
		

Aneroid pressure		
hPa	: 1000	
Rated speed rpm	: 600	
Del. quantity cm3/1000 strokes	: 203.0	
Tolerance	. 203.6	
cm3/1000 strokes	: +- 3.0	
Check tolerance		
cm3/1000S.	: +- 6.0	
Spreed Tolerance		
cm3/1000 strokes	: 8.0	
Check tolerance		
cm3/1000S.	: 12.0	
		
rack travel mm	: 12.55	
Tolerance mm	: ← 0.05	
Aneroid pressure		
hPa	: -	
Rated speed rom Del. quantity	: 500	
cm3/1000 strokes	: 138.0	
Tolerance	,,,,,,,	
cm3/1000 strokes	: +- 1.0	
Check tolerance cm3/1000S.	: +- 2.0	
Spreed	. +- 2.0	
Tolerance		
cm3/1000 strokes	: 8.0	
CTARTAIC CUEL NE		_
STARTING FUEL DEL	TAEKI	
Rated speed rpm	: 100	
Del. quantity	403.0	
cm3/1000 strokes Tolerance	: 190.0	
cm3/1000 strokes	: +- 10.0	
Check tolerance		
cm3/1000S.	: ← 15.0	
LOW IDLE	······································	
Rack travel in mm	: 6.00	
Tolerance mm	: +- 0.10	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 03.07.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 648 700

Injection pump

Pump designation : PE8P12OA320LS7910 EP type number : 0 412 628 924

Governor

Governer design. : RQV350...1050PA1338

Governer no. : 0 421 814 192

Cust. part No. : 027 074 5302

Customer-spec. information

Customer : MB-NFZ
Motor : 0M442A Euromot
Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : \leftarrow 0.1

Overflow quantity

min. L/h : 265
Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test Lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

: **←** 0.10 tolerance mm

Rack travel in mm: 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : **←** 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 12.80 Tolerance mm : +- 0.05

		+ guide sleeve
Del. quantity cm3/1000 strokes	: 194.0	travel mm : 3.60 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes	: +- 1.0	Rated speed rpm : 1197 guide sleeve
Check tolerance cm3/1000s.	: + 4.0	travel mm : 10.00 Tolerance mm : +- 0.25
Spreed		+ Rated speed rpm : 1290 + guide sleeve + travel mm : 11.50
Tolerance cm3/1000 strokes	: 5.0	Tolerance mm : + 0.50
Check tolerance cm3/1000s.	: 9.0	GUIDE SLEEVE POSITION
		T control lever
		position degree : - 3
Rated speed rpm	: 350	Rated speed rpm : 1161
Rack travel in mm	o: 5.20	Rack travel in mm : 12.20
Tolerance mm	: + 0.10	+ Tolerance mm : +- 1.30
Del. quantity		10 cer di lee linii
cm3/1000 strokes	: 19.0	
Tolerance		FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes	: ← 3.0	
Check tolerance		+ Rated speed rpm : 1030
cm3/1000s.	: +- 6.0	+ Aneroid pressure
Spreed	_	+ hPa : 1200
Tolerance		+ Del. quantity
cm3/1000 strokes	: 8.0	- cm3/1000 strokes : 194.0
Check tolerance		Tolerance
cm3/1000s.	: 12.0	+ cm3/1000 strokes : + 1.0
		- Check tolerance
		+ cm3/1000s. : ÷− 4.0
(B) SETTING OF IN	JECTION PUMP	Spreed
WITH GOVERNOR		+ Tolerance
		+ cm3/1000 strokes : 5.0
		+ Check tolerance
GUIDE SLEEVE TRAV	EL	+ cm3/1000s. : 9.0
Rated speed rpm	: 1107	‡
guide sleeve		+
travel mm	: 8.18	+ CONTROL LEVER
Tolerance mm	: +- 0.15	}
		+ control lever
Rated speed rpm	: 350	+ position degree : 120.0
guide sleeve	_ =	+ tolerance degree : +- 4.0
travel mm	: 2.02	+
Tolerance mm	: +- 0.20	+ RATED SPEED
Data I I	800	+ rack travel mm : 11.80
Rated speed rpm	: 890	+ Rated speed rpm : 1095
guide sleeve	. 570	† Tolerance 1/min : +- 5
travel mm	: 5.70	† week travel my / 00
Tolerance mm	: +- 0.25	+ rack travel mm : 4.00
Makad	. 540	+ Rated speed rpm : 1170
Rated speed rpm	: 560	+ Tolerance 1/min : +- 15

rack travel mm Tolerance mm Rated speed rpm	: 0.85 : +- 0.85 : 1200
LOW IDLE	
control lever position degree tolerance degree	: 70.0 : + 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 250
CRT mm min.	: > 6.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 350 : 5.20 : +- 0.10
Rated speed rpm rack travel mm	: 400 : 2.00
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1030 : 12.80 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 700 : 13.40 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 825 : 13.15 : + 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa	: 500 : -
MEASUREMENT	
Pressure hPa rack travel mm Tolerance mm	: 250 : 0.35 : +- 0.05
Pressure hPa	: 400

rack travel mm Tolerance mm	: 1.75 : +- 0.15
Start interlock	
Rated speed rpm	: > 100
Rated speed rpm Rated speed rpm	: < 270
Check	
speed 1/min Check	: > 80
speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	4.00
hPa Rated speed rpm	: 1200 : 700
Del. quantity	
cm3/1000 strokes Tolerance	: 210.0
cm3/1000 strokes	: 2.0
Check tolerance	
cm3/1000s. Spreed	: +- 5.0
Tolerance	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 12.0
	. 12.0
rack travel mm	: 13.15
Tolerance mm	: +- 0.05
Aneroid pressure	
hPa Rated speed rpm	: ~ : 500
Del. quantity	. 500
cm3/1000 strokes Tolerance	: 137.0
cm3/1000 strokes	: +- 1.0
Check tolerance	
cm3/1000s. Spreed	: +- 4.0
Tolerance	
am7/1000 atacked	
cm3/1000 strokes	: 8.0
Check tolerance cm3/1000s.	: 8.0 : 12.0
Check tolerance	: 12.0
Check tolerance cm3/1000S. STARTING FUEL DEL	: 12.0
Check tolerance cm3/1000s.	: 12.0 IVERY : 100

Tolerance cm3/1000 strokes : +- 10.0 Check tolerance

cm3/1000s. : +- 14.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.20 Tolerance mm: +- 0.10 Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

Spreed Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 01.07.98 : ISO 4113

Combination No. : 0 402 676 817

Injection pump

Pump designation : PE6P120A720RS7188

: -10

EP type number : 0 412 626 924

Governor

Governer design. : RSV350...1050P1A543

Governer no. : 0 421 833 426

Cust. part No. : 1355270

Customer-spec. information Customer : SCANIA

Motor

: DS1166 A

TEST BENCH REQUIREMENTS

inlet line : 4.2

Vibration damper

(RoBo diaphragm) : 3.1

Test oil inlet

temp. °C

Tolerance °C

: **←** 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 205
Tolerance l/h : + 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no.

: 1

	†
BASIC SETTING	CONTROL LEVER
Del. quantity cm3/1000 strokes : 212.0	control lever position degree : 67.0 tolerance degree : +- 4.0
Tolerance cm3/1000 strokes : + 1.0	control lever position degree : 117.0
Check tolerance cm3/1000S. : + 4.0	tolerance degree : + 4.0 RATED SPEED
Spreed	rack travel nm : 11.50 Rated speed rpm : 1095
Tolerance cm3/1000 strokes : 8.0	Tolerance 1/min : + 5 Check speed 1/min : + 10
Check tolerance cm3/1000s. : 12.0	rack travel mm : 4.00 Rated speed rpm : 1170
	Tolerance 1/min : + 15 + Check
Rated speed rpm : 350	speed 1/min : +- 20
Rack travel in mm: 4.70 Tolerance mm: + 0.10 Del. quantity	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
cm3/1000 strokes : 19.0 Tolerance	the speed (pill)
cm3/1000 strokes : + 3.0 Check tolerance	+
cm3/1000\$. : +- 6.0 Spreed	+ LOW IDLE
Tolerance cm3/1000 strokes : 4.0 Check tolerance	+ control lever + position degree : 81.0
cm3/1000s. : 8.0	tolerance degree : + 4.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 31.0 tolerance degree : + 4.0
	Setting point w/out bumper spring
GUIDE SLEEVE POSITION	Rated speed rpm : 350 rack travel mm : 4.20 Tolerance mm : + 0.10
control lever position degree : - 3 Rated speed rpm : 800	Rated speed rpm : 100
Rack travel in mm : 0.50	CRT mm min. : > 19.50
Tolerance mm : + 0.20	+ Testing:
governor spring pre-tension	Rated speed rpm : 350 rack travel mm : 4.70 Tolerance mm : + 0.10
click setting x : 6.00	+
	+ rack travel mm : 2.00

Rated speed rpm : 480 Tolerance 1/min : +- 30 TORQUE CONTROL Rated speed rpm : 1050 rack travel mm : 12.55 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.55 Tolerance mm : +- 0.05 Rated speed rpm : 500 Pressure hPa : rack travel mm : 10.00
Tolerance mm : + 0.20 **MEASUREMENT** Rated speed rpm : 500 Pressure hPa : 520 rack travel mm : 11.20 Tolerance mm : + 0.15 Fressure hPa : 700 rack travel mm : 12.05 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa Rated speed rpm : 1050 Del. quantity cm3/1000 strokes : 197.0 Tolerance cm3/1000 strokes : +- 4.0Check tolerance cm3/1000s. : +- 6.0 Aneroid pressure Rated speed rpm : 500 Del. quantity

Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 10.00 Tolerance mm : + 0.20 Del. quantity cm3/1000 strokes : 145.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 4.70
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 19.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

End of test specification sheet

cm3/1000 strokes : 136.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 06.07.98 Test oil : 150 4113

Combination No. : 0 402 676 833

Injection pump

Pump designation : PE6P120A320RS7426 EP type number : 0 412 626 958

Governor

Governer design. : RSV300...1100P1A650 Governer no. : 0 421 833 567

Cust. part No. : 3826502 P04 v.06/97

Customer-spec. information Customer : PENTA

Motor : TWD 1031 VE Power KW : 235.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration

damper

(RoBo diaphragm) : 4.2

Test oil inlet

: 40 temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 300
Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 7.40 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Barrel no.	: 1
BASIC SETTING	
Rated speed rpm	: 1050
Rack travel in mm Tolerance mm	: 12.00 : → 0.05
Del. quantity cm3/1000 strokes	: 292.0
Toterance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: + 4.0
Spr ee d	
Tolerance cm3/1000 strokes	: 7.0
Check tolehance cm3/1000s.	: 11.0
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity	: 4.60 : +- 0.10
cm3/1000 strokes	: 22.0
Tolerance cm3/1000 strokes	: ← 3.0
Check tolerance cm3/1000s. Spreed	: +- 6.0
Tolerance cm3/1000 strokes	: 5.0
Check tolerance cm3/1900s.	: 8.0
(B) SETTING OF INJ WITH GOVERNOR	JECTION PUMP

control lever position degree Rated speed rpm	: - 3 : 800
Rack travel in mm Tolerance mm	: 0.50 : +- 0.20
governor spring pre-tension click setting x	: 4.25
FULL LOAD DELIVER	Y AT FULL LOAD STOP
Rated speed rpm Aneroid pressure	: 1050
hPa	: 1500
Del. quantity cm3/1000 strokes	: 292.0
Tolerance	. 272.0
cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	; 4.0
Spreed	. +- 4.0
Tolerance	
cm3/1000 strokes	: 7.0
Check tolerance cm3/1000s.	: 11.0
CIII 7 10003.	. 11.0
CONTROL LEVER	
control lever	: 55.0 : +- 4.0
control lever	: +- 4.0 : 107.0
control lever position degree tolerance degree control lever position degree	: +- 4.0 : 107.0
control lever position degree tolerance degree control lever position degree tolerance degree RATED SPEED rack travel mm Rated speed rpm	: +- 4.0 : 107.0 : +- 4.0 : 11.00 : 1080
control lever position degree tolerance degree control lever position degree tolerance degree RATED SPEED rack travel mm Rated speed rpm Tolerance 1/min rack travel mm Rated speed rpm	: +- 4.0 : 107.0 : +- 4.0 : 11.00 : 1080 : +- 5 : 4.00 : 1125

LOW IDLE

				+
control le position d tolerance	legree	: 73.0 : + 4.0		†
control le position d tolerance	legree	: 23.0 : + 4.0		+
Serting po	int w/ou	t bumper sp	oring	Ŧ
Rated spee rack trave Tolerarice	Lmm	: 300 : 4.10 : + 0.10		†
Testing:				Ŧ
Rated spee rack trave Tolerance	Lmm	: 300 : 4.50 : + 0.10		
rack trave Rated spee Tolerance	d rpm	: 2.00 : 360 : + 30		T + + +
TORGUE CON Rated spee rack trave Tolerance	d ripm l mm	: 1050 : 12.00 : + 0.05		
Rated spee rack trave Tolerance	Lmm	: 700 : 12.00 : + 0.10		T + + +
ANEROID/AL COMPENSATO				† † †
SETTING				‡
Rated spee Pressure h rack trave Tolerance	Pa Lmm	: 500 : 1500 : 12.00 : ← 0.10		+ + +
Rated spee Pressure h rack trave Tolerance	Pa l mm	: 500 : - : 7.40 : + 0.20		T T
MEASUREMEN	τ			Ŧ
Rated spee	d rpm	: 500		Ī
Pressure h rack trave Tolerance	Lmm	: 840 : 3.90 : + 0.20		+

Pressure hPa	:	220
rack travel mm	:	0.25
Tolerance mm	: +-	0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		1500
	•	
Rated speed rpm	:	700
Del. quantity		
cm3/1000 strokes	:	328.0
Tolerance		
cm3/1000 strokes	: +-	3.0
Check tolerance		
cm3/1000s.	: +-	6.0
Spreed		
Tolerance		
cm3/1000 strokes	:	9.0
Check tolerance	•	
cm3/1000s.		13.0
(1127 10003.	•	13.0

Aneroid pressure			
hPa	:		_
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strckes	:		188.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	:	+-	4.0

1	OL:	TDI	_

Rated speed rpm	:		300
Rack travel in mm Tolerance mm Del. quantity	:	+-	4.60 0.10
cm3/1000 strokes Tolerance	:		22.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s.	:	+-	6.0
Tolerance cm3/1000 strokes	:		5.0
Check tolerance cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 06.07.98 Test oil Edition : ISO 4113

Combination No. : 0 402 736 889

Injection pump

Pump designation : PES6P120A120RS7390 EP type number : 0 412 726 945

Governor

Governer design. : RQV350...1100PA1244K

Governer no. : 0 421 815 477

Cust. part No. : 3283279

Customer-spec. information Customer : CUMMINS Motor : 6CTAA Power KW : 179.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 1.5

Overflow quantity

min. L/h : 90
Tolerance L/h : +- 10.0

Test nozzle holde assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.30 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : +-0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery blocking

*NW after s.o.d. : 7.70 Tolerance : +- 0.10

Check

tolerance "NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

	1
Rack travel in mm : 13.70 Tolerance mm : + 0.05	Rated speed rpm : 420 guide sleeve travel mm : 4.28
Del. quantity cm3/1000 strokes : 173.0	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : +- 1.0	+ Rated speed rpm : 1380 + guide sleeve + travel mm : 13.50
Check tolerance cm3/1000s. : + 4.0	Tolerance mm : +- 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1195
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 12.00 Tolerance mm : +- 2.00
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.10 Tolerance mm : + 0.10	Rated speed rpm : 1100 Aneroid pressure
Del. quantity cm3/1000 strokes : 18.0 Tolerance	+ hPa : 1500 - Del. quantity - cm3/1000 strokes : 173.0
<pre>cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 5.0</pre>	Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed Tolerance	cm3/1000S. : +- 4.0 Spreed
cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
(B) SETTING OF INJECTION PUMP	- cm3/1000s. : 9.0
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever
Rated speed rpm : 1159 - guide sleeve	+ position degree : 68.0 + tolerance degree : +- 4.0 -
travel mm : 10.27 Tolerance mm : + 0.15	control lever position degree : 122.0 tolerance degree : +- 4.0
Rated speed rpm : 350 guide sleeve travel mm : 1.93	RATED SPEED : 12.70
Tolerance mm : + 0.20	Rated speed rpm : 1145 Tolerance 1/min : + 5
Rated speed rpm : 710 - guide sleeve : 5.79	rack travel mm : 4.00 Rated speed rpm : 1245
Tolerance mm : +- 0.25	+ Tolerance 1/min : +- 15

Check speed 1/min : +- 20	Rated speed rpm : 700 Pressure hPa : -
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350	rack travel mm : 10.70 Tolerance mm : +- 0.20
, , , , , , , , , , , , , , , , , , ,	MEASUREMENT
	Rated speed rpm : 700
LOW IDLE	Pressure hPa : 400 rack travel mm : 11.70 Tolerance mm : + 3.20
control lever position degree : 74.0 tolerance degree : +- 4.0	Pressure hPa : 600 rack travel mm : 13.30 Tolerance mm : + 0.05
control lever position degree : 20.0 tolerance degree : + 4.0	Start interlock
Setting point w/out bumper spring	+ Rated speed rpm : > 100 + Rated speed rpm : < 290
Rated speed rpm : 250	Check
CRT mm min. : > 7.50	speed 1/min : > 80
Testing:	speed 1/min : < 300
Rated speed rpm : 350 rack travel mm : 5.10 Tolerance mm : +- 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 350	Aneroid pressure hPa : 1500
TORQUE CONTROL Rated speed rpm : 1100 rack travel mm : 13.70	Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 171.0 Tolerance
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700	- Del. quantity - cm3/1000 strokes : 171.0 - Tolerance - cm3/1000 strokes : + 3.0 - Check tolerance - cm3/1000s. : + 6.0
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : +- 0.10	Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700	Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : +- 0.10	Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : +- 0.15 ANEROID/ALTITUDE	Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0
Rated speed rpm : 1100 rack travel mm : 13.70 Tolerance mm : +- 0.05 Rated speed rpm : 700 rack travel mm : 13.85 Tolerance mm : +- 0.10 Rated speed rpm : 500 rack travel mm : 12.95 Tolerance mm : +- 0.15 ANEROID/ALTITUDE COMPENSATOR TEST	Del. quantity cm3/1000 strokes : 171.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000S. : + 6.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000S. : 12.0

Check tolerance cm3/1000s. : ← 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50

Del. quantity

cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.10 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 18.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000S. : +- 5.0

Spreed Tolerance

cm3/1000 strokes : 7.0

Check tolerance

cm3/1000s. 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.98 Test oil : ISO 4113

Combination No. : 0 402 746 606

Injection pump

Pump designation : PES6P110A720RS7406 EP type number : 0 412 716 810

Governor

Governer design. : RQV300...1050PA1090

: -1K

Governer no. : 0 421 815 497

Cust. part No. : 9279607

Customer—spec. information
Customer : LIEBHERR
Motor : D 926 TI-E
Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 125 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05
Check

tolerance mm : + 0.10

Rack travel in mm : 10.00 Tolerance mm : + 1.00

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : → 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.80Tolerance mm : +0.05

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : +- 1.0

G10

Check tolerance - cm3/1000s. : +- 4.0 -	CUIDE SI FEVE DOCUTION
Spreed	- GUIDE SLEEVE POSITION
Tolerance - 5.0	- control lever - position degree : – 1 - Rated speed rpm : 1180
Check tolerance - cm3/1000s. : 9.0 -	- Rack travel in mm : 12.80 - Tolerance mm : +- 2.00
Rated speed rpm : 350	- FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.20 - Tolerance mm : + 0.10 - Del. quantity -	- Rated speed rpm : 1050 - Aneroid pressure - hPa : 1600
cm3/1000 strokes : 25.0 - Tolerance -	Del. quantity cm3/1000 strokes : 205.0
<pre>cm3/1000 strokes : +- 3.0</pre>	- Tolerance - cm3/1000 strokes : +- 1.0 - Check tolerance
Spreed - Tolerance - cm3/1000 strokes : 6.0 -	- cm3/1000S. : +- 4.0 - Spreed - Tolerance
Check tolerance - cm3/1000s. : 10.0 -	- cm3/1000 strokes : 5.0 - Check tolerance - cm3/1000s. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever : 116.0
Rated speed rpm : 1117 - guide sleeve -	- tolerance degree : +- 4.0
travel mm : 10.27 - Tolerance mm : + 0.15 -	- RATED SPEED - rack travel mm : 12.80 - Rated speed rpm : 1090
Rated speed rpm : 350 - guide sleeve -	Tolerance 1/min : +- 5
travel mm : 1.86 - Tolerance mm : +- 0.20 -	- rack travel mm : 4.00 - Rated speed rpm : 1195 - Tolerance 1/min : +- 15
Rated speed rpm : 756 - guide sleeve - travel mm : 6.17 -	- - rack travel mm : 0.50 - Tolerance mm : +- 0.50
Tolerance mm : +- 0.25	- Rated speed rpm : 1300
Rated speed rpm : 480 guide sleeve travel mm : 3.75	-
Tolerance mm : +- 0.25	- LOW IDLE -
Rated speed rpm : 1330 - guide sleeve - travel mm : 13.50 -	- control lever
Tolerance mm : + 0.50	- position degree : 71.0 - tolerance degree : +- 4.0

tting point w/o	ut bumper spring	+ Pressure hPa + rack travel mm	: 11.
ted speed rpm	: 250	† Tolerance mm	: +- 0.
mm min.	: > 7.40	<u> </u>	
ting:		FUEL DELIVERY CHA	RACTERIST
ting:		Ī ——	
ed speed rpm		Aneroid pressure	
k travel mm	: 5.20	+ hPa + Rated speed rpm	: 1600
erance mm	: +- 0.10	+ Rated speed rpm	: 500
od anaad	. /30	+ Del. quantity + cm3/1000 strokes	. 10/
ed speed rpm	. 420	+ Tolerance	: 194
		- cm3/1000 strokes	· +- 3
QUE CONTROL		+ Check tolerance	
ed speed rpm	: 1050	+ cm3/1000s.	: ← 6
k travel mm	: 13.80	+	•
erance mm	: ← 0.05	+	
		+ Aneroid pressure	
ed speed rpm k travel mm erance mm	: 500		: 1600
k travel mm	: 10.90	+ Rated speed rpm	: 800
rance mm	: + 0.15	hPa Rated speed rpm Tolerance mm	: + O.
		+ Det. Quantity	
d speed rpm rance mm	: 800	cm3/1000 strokes	: 207
erance mm	: +- U.15	+ Tolerance	
	. 050	cm3/1000 strokes	
d speed rpm	: 95U	+ Check tolerance	, ,
travel mm	: 13.35	- cm3/1000s.	: +- 6
ance mm	: +- 0.70	†	
d append	. 400	Ananaid	
ed speed rpm k travel mm grance mm	. 11 /5	+ Aneroid pressure + hPa	
, travet mm	· +- 0.15	Rated speed rpm	500
i di ice min	. 1- 0.15	+ Del. quantity	.)
		- + cm3/1000 strokes	. 182
ROID/ALTITUDE		Tolerance	. 102
PENSATOR TEST		cm3/1000 strokes	: +- 1
		+ Check tolerance	
		+ cm3/1000s.	
ING		+	
ad speed ann	. 1050	† <u> </u>	
a speed rom	. UCUI • 1600	STARTING FUEL DEL	TVEDY
travel mm	· 13 80	T STAKTING FUEL DEL	TACKI
ed speed rpm ssure hPa c travel mm erance mm	: + 0.05	Rated speed rpm	• 100
A QUICE IMI	0.05	rack travel mm	. 100
d speed rpm	: 1050	+ Tolerance mm	· +- 0
sure hPa	: -	+ Del. quantity	
ure hPa ance mm	· : +- 0.15	+ cm3/1000 strokes	: 175
	= 7 1#	+ Tolerance	. ,,,,
JREMENT		+ cm3/1000 strokes	: +- 10
		+ Check tolerance	
d speed rpm	: 1050	+ cm3/1000s.	: +- 14
		+	
ssure hPa		+	
travel mm	: 13.00	+	
ance mm	: +- 0.05		

Rated speed rpm	:	350
Rack travel in mm Tolerance mm Del. quantity	: : +-	5.20 0.10
cm3/1000 strokes Tolerance	:	25.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes	:	6.0
Check tolerance cm3/1000s.	:	10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 03.07.98 : ISO 4113 Edition Test oil

Combination No. : 0 402 746 606A

Injection pump

Pump designation : PES6P110A720RS7406 EP type number : 0 412 716 810

Governor

Governer design. : RQV300...1050PA1090

: -1K

Governer no. : 0 421 815 497

Cust. part No. : 9279608

Customer-spec. information

Customer : LIEBHERR
Notor : D 926 TI-E A3
Power KW : 230.0

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity min. L/h : 125
Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.00 Tolerance mm : +- 1.00

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 13.80 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000S.	: +- 4.0	CUIDE SI SELIE DOSTITON
Spreed		+ GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes	: 5.0	control lever position degree : - 1 Rated speed rpm : 1180
Check tolerance cm3/1000S.	9.0	Rack travel in mm : 12.80 Tolerance mm : +- 2.00
Rated speed rpm	: 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000s.	 : ← 0.10 : 25.0 : ← 3.0 : ← 6.0 : 6.0 : 10.0 	Rated speed rpm : 1050 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 205.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1009s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
WITH GOVERNOR		CONTROL LEVER
GUIDE SLEEVE TRAVE Rated speed rpm guide sleeve travel mm Tolerance mm	: 1102 : 10.05 : + 0.15	control lever position degree : 116.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1090
Rated speed rpm guide sleeve travel mm Tolerance mm	: 350 : 1.86 : + 0.20	Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1195
Rated speed rpm guide sleeve travel mm Tolerance mm	: 749 : 6.11 : + 0.25	Tolerance 1/min : +- 15 rack travel min : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1300
Rated speed rpm guide sleeve travel mm Tolerance mm	: 480 : 3.75 : + 0.25	LOW IDLE
Rated speed rpm guide sleeve travel mm Tolerance mm	: 1330 : 13.50 : +- 0.50	control lever position degree : 71.0 tolerance degree : + 4.0

Setting point w/o	ut branca oppina	+ Pressure hPa	: 670
setting point w/o	or politier shritig	rack travel mm Tolerance mm	: +- 0.10
Rated speed rpm	: 250	‡	
CRT mm min.	: > 7.40	FUEL DELIVERY C	
Testing:			MACIENTOTICS
Rated speed rpm rack travel mm	: 350	+ Aneroid pressure	9
rack travel mm Tolerance mm	: 5.20 : +- 0.10	hPa + Rated speed rpm	: 1600
TO CET OFFICE THE	. += 0.10	Del. quantity	. 500
Rated speed rpm	: 420	+ cm3/1000 stroke	s : 194.0
		+ Tolerance - + cm3/1000 stroke:	· 3 N
TORQUE CONTROL		+ Check tolerance	
Rated speed rpm	: 1050	+ cm3/1000s.	
rack travel mm	: 13.80	+	
Tolerance mm	: + 0.05	+	
0-4	. 500	+ Aneroid pressure	
Rated speed rpm rack travel mm	: 500 · 10.00	+ hPa + Rated speed rpm	: 1600
Toterance mm	· + 0.15	Tolerance mm	· +- 0 15
		+ Del. quantity	
Rated speed rpm	: 800	+ cm3/1000 stroke	
Tolerance mm	: +- 0.15	+ Tolerance	
.	050	+ cm3/1000 stroke	
Rated speed rpm	: 950 : 13.35	+ Check tolerance	
rack travel mm Tolerance mm	: + 0.10	$\frac{1}{1}$ cm3/1000s.	: +- 6.0
TO CET CETICE TIRII	0.10		
Rated speed rpm		+ Aneroid pressure	•
rack travel mm	: 11.45	+ hPa	: -
Tolerance mm	: ↔ 0.10	Rated speed rpm	
		+ Del. quantity	
ANEROID/ALTITUDE		- + cm3/1000 stroke: + Tolerance	5 : 102.0
COMPENSATOR TEST		+ cm3/1000 stroke	s : +- 1.0
		+ Check tolerance	
		+ cm3/1000s.	: +- 4.0
SETTING		+ Spreed	
Rated speed rpm	: 1050	Tolerance cm3/1000 stroke:	s : 8.0
Pressure hPa		+ Check tolerance	
rack travel mm		+ cm3/1000s.	: 12.0
Tolerance mm	: +- 0.05	†	
Rated speed rpm	· 1050	İ	
Pressure hPa	: -	STARTING FUEL D	ELIVERY
Tolerance mm	: +- 0.10	+	
		+ Rated speed rpm	
MEASUREMENT		+ rack travel mm	
Pated cheed and	: 1050	† Tolerance mm	: +- 0.20
Rated speed rpm	: 1050	+ Del. quantity + cm3/1000 stroke:	s : 175.0
Pressure hPa	: 940	+ Tolerance	. 115.0
rack travel mm	: 13.00	+ cm3/1000 strokes	s : +- 10.0
Tolerance mm	: +- 0.05	+ Check tolerance	
		+ cm3/1C00s.	: +- 14.0

FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1600 : 500 : 194.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1600 : 800 : +- 0.15 : 207.0 : +- 3.0 : +- 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000S.	:
STARTING FUEL DEL Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 100 : 10.60 : +- 0.20

LOW IDLE

Rated speed rpm	:		350	
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.20 0.10	
cm3/1000 strokes	:		25.0	
Tolerance cm3/1000 strokes	:	+-	3.0	
Check tolerance cm3/1000S. Spreed	:	←	6.0	
Tolerance cm3/1000 strokes Check tolerance	:		6.0	
cm3/1000s.	:		10.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.07.98 : ISO 4113

Combination No. : 0 402 746 633

Injection pump

Pump designation : PES6P120A720RS7366 EP type number : 0 412 726 933

Governor

Governer design. : RQ300/1050PA1344 Governer no. : 0 421 801 821

Cust. part No. :

Customer-spec. information

Customer : IVECO-FRANCE Motor : 8460.41R.7143 Power KW : 214.0

TEST BENCH REQUIREMENTS

Inlet line : 4.2

Test oil inlet

temp. °C : 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 076

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity min. l/h : 180 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.40

Barrel no. : 1

BASIC SETTING

Rack travel in mm: 11.85 Tolerance mm: + 0.05	Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 226.0
Del. quantity cm3/1000 strokes : 226.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Tolerance cm3/1000 strokes : + 1.0	cm3/1000s. : +- 4.0 Spreed Tolerance
Check tolerance cm3/1000s. : + 4.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Spreed	CRD, 16003 7.0
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 94.0 tolerance degree : +- 4.0
Rated speed rpm : 300	RATED SPEED rack travel ma : 10.80 Rated speed rpm : 1103
Rack travel in mm : 6.50 + Tolerance mm : + 0.10 + Del. quantity +	Tolerance 1/min : +- 8 Check speed 1/min : +- 13
cm3/1000 strokes : 20.0 + Tolerance cm3/1000 strokes : +- 3.0 +	rack travel mm : 4.00 Rated speed rpm : 1180
Check tolerance + 6.0 + Spreed	Tolerance 1/min : +- 15 Check speed 1/min : +- 20
Tolerance + cm3/1000 strokes : 8.0 + Check tolerance +	rack travel mm : 0.50 Tolerance mm : +- 0.50
cm3/1000s. : 12.0	Rated speed rpm : 1350
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	
+	LOW IDLE
GUIDE SLEEVE POSITION	control lever position degree : 72.0 tolerance degree : +- 4.0
control lever position degree : 109 Rated speed rpm : 500	Setting point w/out bumper spring
Rack travel in mm : 20.00	Rated speed rpm : 200
Tolerance mm : +- 0.80	CRT mm min. :> 7.80
FULL LOAD DELIVERY AT FULL LOAD STOP	Testing:
Rated speed rpm : 1050	Rated speed rpm : 300 rack travel mm : 6.50 Tolerance mm : +- 0.10

Rated speed rpm Tolerance 1/min	: 2.00 : 395 : +- 20
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 11.85 : + 0.05
Rated speed rpm rack travel nm Tolerance mm	: 500 : 13.35 : ← 0.10
Rated speed rpm rack travel mm Tolerance mm	: 850 : 12.80 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 950 : 12.25 : + 0.20
Rated speed rpm rack travel mm Tolerance mm	: 560 : 13.70 : + 0.20
ANEROID/ALTITUDE	
COMPENSATION TEST	
COMPENSATION TEST	: 600 : 1200 : 13.35 : ← 0.10
COMPENSATIOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm	: 1200 : 13.35
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1200 : 13.35 : + 0.10 : 600 : - : 9.90
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm	: 1200 : 13.35 : + 0.10 : 600 : - : 9.90
COMPENSATOR TEST SETTING Rated speed rpm Pressure hPa rack travel mm Tolerance mm Rated speed rpm Pressure hPa rack travel mm Tolerance mm MEASUREMENT	: 1200 : 13.35 : ← 0.10 : 600 : - : 9.90 : ← 0.20

Rated speed rpm	: < 250
Check speed 1/min Check	: > 80
speed 1/min	: < 260
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm rack travel mm Tolerance mm	: 1200 : 500 : 12.80 : + 0.20
Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	
Check tolerance cm3/1000s.	: +
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. STARTING FUEL DEL	: + 1.0 : + 4.0
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 11.90 : + 0.30 : 100.0
LOW IDLE	
Rated speed rpm	: 300
Rack travel in mm Tolerance mm Del. quantity cm3/1000 strokes	: +- 0.10

Tolerance
cm3/1000 strokes : +- 3.0
Check tolerance
cm3/1000s. : +- 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 04.07.98 : ISO 4113

Combination No. : 0 400 678 040

Injection pump

Pump designation : PE8A95D410LS2608 EP type number : 0 410 698 988

Governor

Governer design. : RSV300...1325A8c1002

Governer no. : 0 420 232 310

Cust. part No. :

Customer—spec. information

Customer : KHD

Motor

: F8L413F

Power KW

: 188.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar : 173.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

REMARKS

x Length mm :

x inside diameter: 2.0

600

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

mer values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : +- 1.0

Prestroke mm : 2.05 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 1.50

Firing order : 1-8-7-2-6

: - 5- 4- 3

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1325

Rack travel in mm: 9.75 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 92.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: ← 3.0

Spreed

Tolerance cm3/1000 strokes : 3.0	theck tolerance cm3/1000s. : 6.0
Check tolerance cm3/1000S. : 6.0	
	CONTROL LEVER
Rated speed rpm : 300	+ control lever + position degree : 113.0 + tolerance degree : +- 4.0
Rack travel in mm : 6.00	Ť
Tolerance mm : ← 0.10	+ RATED SPEED
Del. quantity	+ rack travel imm : 3.70
cm3/1000 strokes : 12.0	+ Rated speed rpm : 1370
Tolerance cm3/1000 strokes : +- 3.0	† Tolerance 1/min : +- 5
Check tolerance	Track travel mm : 4.00
cm3/1900s. : +- 5.5	Rated speed rpm : 1405
Spreed	+ Tolerance 1/min : ÷ 15
Tolerance	+
cm3/1000 strokes : 5.0	rack travel mm : 1.00
Check tolerance	+ Tolerance mm : + 0.70
cm3/1000s. : 9.0	+ Rated speed rpm : 1575 +
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	LOW IDLE
GUIDE SLEEVE POSITION	+ control lever
GOIDE SPEEDE LOSTITON	+ position degree : 71.0
	tolerance degree : + 4.0
control lever	+
position degree : - 3	+ Setting point w/out bumper spring
Rated speed rpm : 800	+
n. 1 1 1 0 0	+ Rated speed rpm : 100
Rack travel in mm : 0.65 Tolerance mm : +- 0.35	CRT mm min. : > 19.00
governor spring pre-tension	Testing:
click setting x : 4.75	Rated speed rpm : 300
Transfer of the state of the st	rack travel mm : 6.00
	+ Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	+
	rack travel mm : 2.00
Rated speed rpm : 1325	+ Rated speed rpm : 340_
Aneroid pressure	+ Tolerance 1/min : + 30
hPa : -	700
Del. quantity	Rated speed rpm : 700
cm3/1000 strokes : 92.5 Tolerance	+ CRT mm max. : < 1.00
cm3/1000 strokes : +- 1.0	T CRY DRILL DIGA 1.00
Check tolerance	F SET IDLE AUXILIARY SPRING
cm3/1000s. : +- 3.0	The state of the s
Spreed	Rated speed rpm : 700
Tolerance	+
cm3/1000 strokes : 3.0	+
	+ TORQUE CONTROL

Rated speed rpm : 1325 rack travel mm : 9.75 Tolerance mm : + 0.05

Rated speed rpm : 500 rack travel mm : 10.05 Tolerance mm : + 0.05

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.20 Tolerance mm : 4- 0.20 Del. quantity

cm3/1000 strokes : 122.0

Tolerance

cm3/1000 strokes : +- 5.5

Check tolerance

cm3/1000s. : +- 8.5

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 6.00
Tolerance mm : 4— 0.10
Del. quantity
cm3/1000 strokes : 12.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 5.5

cm3/1000s. : +- ! Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.07.98 : ISO 4113

Combination No. : 0 400 846 520

Injection pump

Pump designation : PES6A95D410LS2644 EP type number : 0 410 896 924

Governor

Governer design. : RQV250...1100AB1178L

Governer no. : 0 420 212 164

Cust. part No. :

Customer-spec. information

Customer : MAN

Motor : D2566 ME

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

: 40 : + 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.0

Test nozzle holde

assembly : 0 681 343 009

Opening pressure

bar 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 1.55 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

BASIC SETTING

Del. quantity cm3/1000 strokes : 125.5

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes :

3.5

Check tolerance cm3/1000s.

6.0

Rated speed rpm : 250	+ Rated speed rpm : 1145
Rack travel in mm: 7.00	Tolerance 1/min : + 5
Tolerance mm : + 0.10 Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1190
cm3/1000 strokes : 12.0	Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : +- 3.0	rack travel mm : 0.50
Check tolerance cm3/1000s. : +- 5.5	+ Tolerance mm : +- 0.50 + Rated speed rpm : 1300
Spreed Tolerance	‡ ·
cm3/1000 strokes : 3.5 Check tolerance	‡
cm3/1000s. : 5.0	LOW IDLE
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	control lever position degree : 12.0 tolerance degree : + 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring
SOLDE SEELVE FOSIFICAT	Raited speed rpm : 100
control lever position degree : - 1	CRT mm min. : > 8.50
Rated speed rpm : 1125	Testing:
Rack travel in mm : 16.50 Tolerance mm : +- 1.30	Rated speed rpm : 250 rack travel mm : 7.00 Tolerance mm : + 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 2.00 Rated speed rpm : 370
Rated speed rpm : 1100 Aneroid pressure	Tolerance 1/min : + 30
hPa : -	7
Del. quantity cm3/1000 strokes : 125.5	Over the state of
Tolerance cm3/1000 strokes : + 1.0	+ Start interlock
Check tolerance cm3/1000s. : + 3.0 Spreed	+ Rated speed rpm : > 100 + Rated speed rpm : < 170
Tolerance cm3/1000 strokes : 3.5	Check
Check tolerance	+ Check
cm3/1000s. : 6.0	+ speed 1/min : < 190 +
CONTROL LEVER	FUEL DELIVERY CHARACTERISTICS
control lever	Aneroid pressure
position degree : 48.0 tolerance degree : + 4.0	hPa : - Rated speed rpm : 500
RATED SPEED rack travel mm : 11.00	- Del. quantity - cm3/1000 strokes : 110.5

Tolerance cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s.	: +-	5.5

Aneroid pressure		
hPa	:	-
Rated speed rpm	:	750
Del. quantity		
cm3/1000 strokes	:	114.5
Tolerance		
cm3/1000 strokes	: +	- 1.5

Check tolerance cm3/1000s. : + 4.0

STARTING FUEL DELIVERY

:		100
:		14.30
:	+-	0.30
:		126.5
:	+-	5.0
:	+-	8.0
	:	: +-

LOW IDLE

Rated speed rpm	: 250	
Rack travel in mm Tolerance mm Del. quantity	: 7.00 : +- 0.10	
cm3/1000 strokes	: 12.0	
cm3/1000 strokes	: +- 3.0	
cm3/1000s. Spreed	: +- 5.5	
Tolerance cm3/1000 strokes	: 3.5	
Check tolerance cm3/1000s.	: 5.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.07.98 : ISO 4113

Combination No. : 0 401 078 002

Injection pump

Pump designation : PE8A100D320RS3009 EP type number : 0 411 008 002

Governor

Governer design. : RSV300...1150A1C489R

Governer no. : 0 420 233 190

Cust. part No. :

Customer-spec. information Customer : MWM

Motor

: D232~8

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 1 419 922 198

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 343 009 assembly

Opening pressure

: 173.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0

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x length mm : 600 REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant. per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 2.05
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-8-5-4-7

: - 2- 3- 6

: 0-30-90-120-180 Phasing

: -210-270-300 : **←** 0.50

Check

Tolerance

tolerance °NW : **←** 0.75

EASIC SETTING

Del. quantity cm3/1000 strokes : 91.0

Tolerance

cm3/1000 strokes : + 1.0

Check tolerance

cm3/1000s. : +- 3.0

Spreed

Tolerance

cm3/1000 strokes :

Check tolerance

cm3/1000s.

6.0 :

3.5

Rated speed rpm : 300 +	Rated speed rpm : 1175
· · · · · · · · · · · · · · · · · · ·	Tolerance 1/min : +- 5
Rack travel in mm: 6.00	
Tolerance mm : $+$ 0.10 $+$	rack travel mm : 4.00
Del. quantity	rack travel mm : 4.00 Rated speed rpm : 1215
cm3/1000 strokes : 17.5	Tolerance 1/min : + 15
Tolerance	
cm3/1000 strokes : + 3.0 +	rack travel mm : 0.85
Check tolerance	Tolerance mm : + 0.55
cm3/1000s. : +- 5.5	Rated speed rpm : 1400
Spreed	•
Tolerance	rack travel mm : 4.00
cm3/1000 strokes : 3.5	
Check tolerance	
cm3/1000s. : 5.0 +	
+	
+	LOW IDLE
(B) SETTING OF INJECTION PUMP +	
WITH GOVERNOR +	
+	control lever
+	position degree : 25.0
	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION +	
+	Setting point w/out bumper spring
+	
control lever	Rated speed rpm : 300_
position degree : -3	rack travel mm : 5.50
Rated speed rpm : 800 +	Tolerance mm : +- 0.10
†	·
Rack travel in mm: 0.50	Testing:
Tolerance mm : +- 0.20	700
	Rated speed rpm : 300
Ţ	Rated speed rpm : 300
THE LOAD BY THERY AT SHELL LOAD OTOD	rack travel mm : 6.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 6.00 Tolerance mm : + 0.10
 	rack travel mm : 6.00 Tolerance mm : + 0.10
Rated speed rpm : 1130 +	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 1130 + Aneroid pressure +	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 + Aneroid pressure + Pa : -	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00
Rated speed rpm : 1130 + Aneroid pressure + Pa : - Del. quantity + Pa	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 3.0 Spreed	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 3.0 Spreed Tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000s : + 1.0 Check tolerance cm3/1000s : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000s : 6.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0 CONTROL LEVER control lever position degree : 60.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30 LOW IDLE
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000s strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0 CONTROL LEVER control lever position degree : 60.0 tolerance degree : + 4.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30 LOW IDLE Rated speed rpm : 300
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0 CONTROL LEVER control lever position degree : 60.0 tolerance degree : + 4.0 RATED SPEED	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30 LOW IDLE Rated speed rpm : 300 Rack travel in mm : 6.00
Rated speed rpm : 1130 Aneroid pressure hPa : - Del. quantity cm3/1000 strokes : 91.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 3.0 Spreed Tolerance cm3/1000 strokes : 3.5 Check tolerance cm3/1000 strokes : 6.0 CONTROL LEVER control lever position degree : 60.0 tolerance degree : + 4.0	rack travel mm : 6.00 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 515 Tolerance 1/min : + 30 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 16.00 Tolerance mm : + 0.30 LOW IDLE Rated speed rpm : 300

:	17.5
: +-	3.0
• +	5.5
• '	J. J
:	3.5
:	5.0
	: : +- : +- :

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 06.01.98 : ISO 4113

Combination No. : 0 402 036 762

Injection pump

Pump designation : PES6P110A120RS3353

EP type number : 0 412 016 752

Governor

Governer design. : RQV450...1100PA1233

: -1K

Governer no. : 0 421 815 479

Cust. part No. : 3926776

Customer-spec. information Customer : CDC : 6CTA Motor Power KW : 194.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 103

Opening pressure

: 208.5 Tolerance bar : +- 1.5

Test lines : 1 680 750 015

Outside diameter : 6.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm: 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : ← 0.75

Start of delivery blocking

"NW after s.o.d. : 8.00 Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

Beginning of delivery differende

and maximum rack

travel : 13.00 Difference ° CS : 1.20

	+ Tolerance mm : +- 0.25
BASIC SETTING	+ Rated speed rpm : 890 + guide sleeve
Rated speed rpm : 1000	+ travel mm : 4.75 + Tolerance mm : + 0.25
Rack travel in mm : 13.15 Tolerance mm : + 0.05	Rated speed rpm : 1570 guide sleeve
Del. quantity cm3/1000 strokes : 206.5	travel mm : 13.50 Tolerance mm : + 0.50
Tolerance cm3/1000 strokes : + 1.0	FULL LOAD DELIVERY AT FULL LOAD STOP
Check tolerance cm3/1000S. : +- 4.0	+ Rated speed rpm : 1000 + Aneroid pressure + hPa : 1200
Spreed	+ Del. quantity + cm3/1000 strokes : 206.5 + Tolerance
Tolerance cm3/1000 strokes : 8.0	- cm3/1000 strokes : - 1.0 - Check tolerance - cm3/1000s. : + 4.0
Check tolerance cm3/1000s. : 12.0	+ Spreed + Tolerance
	+ cm3/1000 strokes : 8.0 + Check tolerance + cm3/1000s. : 12.0
Rated speed rpm : 500	† +
Rack travel in mm: 6.00 Tolerance mm: + 0.20 Del. quantity	CONTROL LEVER
cm3/1000 strokes : 22.5 Tolerance	control lever position degree : 117.0
cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 5.0	+ tolerance degree : +- 6.0 + RATED SPEED
Spreed Tolerance cm3/1000 strokes : 4.0	rack travel mm : 11.45 Rated speed rpm : 1170
Check tolerance cm3/1000s. : 8.0	Tolerance 1/min : + 15 rack travel mm : 7.95
(B) SETTING OF INJECTION PUMP	+ Rated speed rpm : 1230 + Tolerance 1/min : +- 5
WITH GOVERNOR	rack travel man : 0.50 Tolerance man : +- 0.50 Rated speed rpm : 1350
GUIDE SLEEVE TRAVEL	Traced Speed (pill . 1550
Rated speed rpm : 1214 guide sleeve	Ţ
travel mm : 8.09 Tolerance mm : +- 0.15	LOW IDLE
Rated speed rpm : 500 guide sleeve travel mm : 1.82	control lever position degree : 79.0 tolerance degree : + 6.0
	1 2200, 41,000 403,000 1 . 0.0

H04

Control lever dif Grad	: 38.0	Start interlock	
olerance degree		+	
etting point w/o	out bumper spring	+ Rated speed rpm + Rated speed rpm	
ated speed rpm	: 400	Check	. > 0/
T mm min.	: > 7.50	+ speed 1/min + Check	
sting:		+ speed 1/min	: < 390
ted speed rpm ck travel mm	: 500 : 6.00	FUEL DELIVERY CH	ARACTERISTI
erance mm	: +- 0.20	Ŧ 	
ed speed rpm	: 500	+ Aneroid pressure + hPa	
		hPa Rated speed rpm	: 750
JE CONTROL		— + Del. quantity+ cm3/1000 strokes	. 197
speed rpm	: 1000	+ Tolerance	
k travel mm		+ cm3/1000 strokes	: +- 3.1
erance mm	: +- 0.05	+ Check tolerance + cm3/1000s.	. +- 61
ed speed rpm	: 750	Spreed	0.
k travel mm erance mm	: 750 : 12.55	+ Tolerance	
erance mm	: +- 0.20	+ cm3/1000 strokes	
ed speed rpm	. 1100	t Check tolerance cm3/1000s.	
travel mm	: 12.60	- Ciii57 18003.	• (6.1
rance mm	: ← 0.10		
		+ Aneroid pressure	
DID/ALTITUDE		- + hPa + Rated speed rpm	: 1200 : 1100
ENSATOR TEST		rack travel mm	: 12.6
		+ Tolerance mm	: +- 0.1
TING		+ Del. quantity	400
TING		cm3/1000 strokes	: 190.
ed speed rpm	: 1000	cin3/1000 strokes	: +- 2.
ssure hPa	: 1200	+ Check tolerance	_
ed speed rpm	. 1000	cm3/1000s.	: +- 5.
sure hPa	• -	I	
travel mm erance mm	10.15	+ Aneroid pressure	
ance mm	: +- 0.20	+ hPa + Rated speed rpm	: -
SUREMENT		+ Del. quantity	: 1000
		cm3/1000 strokes	: 124.
ed speed rpm	: 1000	Tolerance	_
essure hPa	: 720	cm3/1000 strokes Check tolerance	
k travel mm	: 12.20	cm3/1000s.	
Lerance mm	: +- 0.30	+	• • •
essure hPa	: 580		
ck travel mm	: 11.20	STARTING FUEL DE	LIVERY
lerance mm	: +- 0.20	+	
		+ Rated speed rpm	: 100

rack travel mm	•		21.00
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		161.0
Tolerance			
cm3/1000 strokes	:	+	20.0
Check tolerance			
cm3/1000s.	:	+-	25.0

LOW IDLE

Rated speed rpm	:	500
Rack travel in mm Tolerance mm Del. quantity	: +-	6.00 0.20
744000	:	22.5
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000S. Spreed	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.07.98 : ISO 4113

Combination No. : F 002 A0Z 069

Injection pump

Pump designation : PES6A95D32O/3RS2881

EP type number : 9 410 037 215

Governor

Governer design. : RSV500...1100A2c947R

Governer no. : F 002 A20 248

Cust. part No. : 3933623

Customer—spec. information

Customer : CDC Motor

: 6BTA

Power KW

: 125.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0

Tolerance bar : +- 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test Lines : 1 680 750 014

Outside diameter : 6.0

H07

x inside diameter: 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85
Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

°NW after s.o.d. : 8.50 Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Dook though in an	. 17.25		
Rack travel in mm Tolerance mm	: + 0.05	FULL LOAD DELIVER	RY AT FULL LOAD STOP
Del. quantity	<u> </u>	Rated speed rpm	: 1100
cm3/1000 strokes	: 113.5	Aneroid pressure	. 1100
	+	hPa	: 1400
Tolerance cm3/1000 strokes	· + 10 I	Del. quantity cm3/1000 strokes	. 117 5
CIRCY TOOC SET ORCS		Tolerance	. 113.3
Check tolerance	+	cm3/1000 strokes	: ← 1.0
cm3/1000s.	: + 3.0 <u>†</u>	Check tolerance cm3/1000s.	: +- 3.0
Spreed	+	Spreed	5.0
* -1	+	Tolerance	7.5
Tolerance cm3/1000 strokes	: 3.5	cm3/1000 strokes Check tolerance	: 3.5
Chist 1000 Strokes	·	cm3/1000s.	: 6.0
Check tolerance			
cm3/1000s.	: 6.0		
		CONTROL LEVER	
Rated speed rpm	: 500	control lever	
	1	position degree	: 98.0
Rack travel in mm		tolerance degree	
	: ← 0.10 +		
Del. quantity	, 31 E	RATED SPEED	42.25
cm3/1000 strokes	: 21.5	rack travel mm	
Tolerance cm3/1000 strokes	20	Rated speed rpm Tolerance 1/min	
Check tolerance	· ·- 2.0	Check	. +-)
	: + 4.5	speed 1/min	: +- 10
Spreed	+		, -
Tolerance	+	rack travel mm	: 4.00
cm3/1000 strokes	: 3.5	Rated speed rpm	
Check tolerance cm3/1000s.		Tolerance 1/min	: +- 5
CM3/10005.	: 5.5	Check speed 1/min	: +- 10
	Ţ	speed Dilli	. +- 10
(B) SETTING OF INJ	ECTION PUMP	rack travel mm	
WITH GOVERNOR	+	Tolerance mm	: +- 0.55
	†	Rated speed rpm	: 1400
		rack travel mm	: 4.00
GUIDE SLEEVE POSIT	ION	Rated speed rpm	: 1270
00100 000000	1	Tolerance 1/min	
	+	Check	
control lever	_ +	speed 1/min	: +- 20
position degree	: - 3		
Rated speed rpm	: 800 +		
Rack travel in mm	: 0.50		
Tolerance mm	: + 0.20	LOW IDLE	
dolloppon anning	+		
governor spring pre-tension	<u> </u>	control lever	
click setting x	: 2.50 I	position degree	: 78 .0
	1	tolerance degree	
	+	•	
	·		

Control lever di Grad tolerance degree Setting point w/	: 20.0	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm rack travel mm Tolerance mm	: 500	Aneroid pressure hPa : 1400 Rated speed rpm : 750 Del. quantity
Rated speed rpm	: 100	cm3/1000 strokes : 134.0 Tolerance
CRT mm min.	: > 19.00	cm3/1000 strokes : +- 2.0 + Check tolerance
Testing:		cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm	: 500 : 5.85 : +- 0.10	rack travel mm : 13.90 Tolerance mm : + 0.20
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 13.25 : +- 0.05	Aneroid pressure hPa : - Rated speed rpm : 500 Dei. quantity cm3/1000 strokes : 86.0
Rated speed rpm rack travel mm Tolerance mm	: 750 : 14.60 : + 0.10	+ Tolerance + cm3/1000 strokes : +- 1.0 + Check tolerance + cm3/1000s. : +- 3.0
Rated speed rpm rack travel mm Tolerance mm	: 13.90	STARTING FUEL DELIVERY
ANEROID/ALTITUDE COMPENSATOR TEST		Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity
SETTING		cm3/1000 strokes : 121.5
Rated speed rpm Pressure hPa		cm3/1000 strokes : + 10.0 Check tolerance cm3/1000s. : + 15.0
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : – : 10.50 : 4– 0.20	
MEASUREMENT		LOW IDLE
Rated speed rpm	: 500	+ Rated speed rpm : 500
Pressure hPa rack travel mm Tolerance mm	: 800 : 13.25 : + 0.20	Rack travel in mm: 5.85 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 21.5
Pressure hPa rack travel mm Tolerance mm	: 11.85	Tolerance - cm3/1000 strokes : +- 2.0 - Check tolerance - cm3/1000S. : +- 4.5
H09		

Spreed
Tolerance
cm3/1000 strokes : 3.5

Check tolerance cm3/1000s.

: 5.5

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 03.07.98 Test oil : ISO 4113

Combination No. : 0 402 648 708

Injection pump

Pump designation : PE8P120A320LS7927 EP type number : 0 412 628 934

Governor

Governer design. : RQ300/1050PA1389 Governer no. : 0 421 801 836

Cust. part No. :

Customer-spec. information

Customer : DHI

Motor : DV15TIS Euro II Power KW : 310.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

1.5

Tolerance bar $: \leftarrow 0.1$

Overflow quantity min. L/h : 110

Tolerance l/h: \leftarrow 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

H11

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.80 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : **←** 0.75

Barrel no. : 8

BASIC SETTING

†	guide sleeve
Rack travel in mm: 12.65	travel mm : 6.00
Tolerance mm : + 0.05	Tolerance mm : +- 0.10
	•
Del. quantity	Rated speed rpm : 1290
cm3/1000 strokes : 229.0	guide sleeve
4	travel mm : 11.50
Tolerance	travel mm : 11.50 Tolerance mm : + 6.5%
cm3/1000 strokes : + 1.0	
1	
Check tolerance	GUIDE SLEEVE POSITION
cm3/1000s. : +- 4.0	GOIDE SECEVE POSITION
tilis/10003 +- 4.0	
†	control lever
9a4ad	position degree : 109 Rated speed rpm : 800
Rated speed rpm : 300	Rated speed rpm : 800
<u> </u>	•
Rack travel in mm: 6.00 +	Rack travel in mm : 20.00
Tolerance mm : + 0.10	Tolerance mm : +- 0.80
Del. quantity	•
cm3/1000 strokes : 18.0	
Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0	
Check tolerance	Rated speed rpm : 500
cm3/1000s. : +- 6.0	Aneroid pressure
Spreed	hPa : 800
Tolerance	Del. quantity
cm3/1000 strokes : 5.0	cm3/1000 strokes : 229.0
Check tolerance	Tolerance
cm3/1000s. : 8.0	cm3/1000 strokes : +- 1.0
Cilia, 1.003 5.0	Check tolerance
T	
(0) 0077710 00 71115077011 01110	cm3/1000s. : +- 4.0
(B) SETTING OF INJECTION PUMP	•
WITH GOVERNOR +	
W2111 GOVE 111011	
WITH GOVERNOR	
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	•
GUIDE SLEEVE TRAVEL	control lever
GUIDE SLEEVE TRAVEL	•
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve	control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35	control lever position degree : 34.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108	control lever position degree : 34.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 Rated speed rpm : 1050	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 Rated speed rpm : 1050	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205
GUIDE SLEEVE TRAVEL Rated speed rpm : 1108 guide sleeve travel mm : 6.35 Tolerance mm : + 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.31 Tolerance mm : + 0.20 Rated speed rpm : 1050 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 441	control lever position degree : 34.0 tolerance degree : +- 4.0 control lever position degree : 96.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 13.00 Rated speed rpm : 1102 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1205 Tolerance 1/min : +- 15

		+ 2-stage LDA sett	ing
LOW IDLE		Rated speed rpm Pressure hPa	: 500 : 800
control lever	74.0	MEASUREMENT	
position degree	: 71.0	† Botad anada ma	. 500
tolerance degree	: +- 4.0	+ Rated speed rpm	: 500
control lever		Pressure hPa	
position degree	: 10.0	+ rack travel mm	
tolerance degree	: +- 4.0	† Tolerance mm	: +- 0.20
Setting point w/	out bumper spring	T Pressure hPa	: 300
		+ rack travel mm	: -3.05
Rated speed rpm	: 200	† Tolerance mm	: +- 0.05
CRT mm min.	: > 7.50	Pressure hPa	
		+ rack travel mm	: 0.85
Testing:		† Tolerance mm	: +- 0.10
Rated speed rpm	: 300	T Pressure hPa	: 1200
rack travel mm	: 6.00	+ rack travel mm	: 0.25
Tolerance mm	: ← 0.10	† Tolerance mm	: +- 0.05
rack travel mm	: 2.00	İ	·
Rated speed rpm		↓ Start interlock	
Tolerance 1/min		- Joedie II/Kei esek	
		+ Rated speed rpm	: > 205
		+ Rated speed rpm	
TORQUE CONTROL		+	
Rated speed rpm		+ Check	
rack travel mm		+ speed 1/min	: > 185
Tolerance mm	: +- 0.05	+ Check	
Rated speed rpm	• 1050	speed 1/min	: < 260
rack travel mm	· 14 AA	I	··· ··································
Tolerance mm		FUEL DELIVERY CH	ARACTERISTICS
		+	
Rated speed rpm rack travel mm		+ Aneroid pressure	
Tolerance mm		+ hPa	: 1800
TOCCI GITTE THE		Rated speed rpm	
		+ Del. quantity	
ANEROID/ALTITUDE		+ cm3/1000 strokes	: 258.0
COMPENSATOR TEST		+ Tolerance	
		+ cm3/1000 strokes	: +- 1.0
		+ Check tolerance	
SETTING		+ cm3/1000s.	: +- 4.0
Dated chard hate	: 500	+ Spreed	
Rated speed rpm Pressure hPa		+ Tolerance + cm3/1000 strokes	: 7.0
rack travel mm		+ Check tolerance	. 1.0
Tolerance mm	: +- 0.15	- cm3/1000s.	: 10.0
		+	. 10.0
Rated speed rpm		+	
Pressure hPa	: -	+ Aneroid pressure	4000
rack travel mm		+ hPa	: 1800
Tolerance mm	: +- 0.20	+ Rated speed rpm	
		+ rack travel mm	: 14.00

: +- 0.10 Tolerance mm Del. quantity cm3/1000 strokes : 275.0 Tolerance cm3/1000 strokes : +-4.0 Check tolerance cm3/1000s. 6.0 Aneroid pressure hPa Rated speed rpm 500 Del. quantity cm3/1000 strokes : 128.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000S. 4.0 STARTING FUEL DELIVERY 100 Rated speed rpm Del. quantity cm3/1000 strokes : 250.0 Tolerance cm3/1000 strokes : +- 10.0Check tolerance cm3/1000s. : - 14.0 LOW IDLE Rated speed rpm 300 Rack travel in mm : 6.00 Tolerance mm 0.10 Del. quantity cm3/1000 strokes : 18.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 10.07.98 : ISO 4113

Combination No. : 0 402 678 836

Injection pump

Pump designation: PE8P120A320LS7844 EP type number : 0 412 628 860

Governor

Governer design. : RSV550...1050P0A672

Governer no. : 0 421 833 591

Cust. part No. : 0270746402

Customer-spec. information Customer : MB-NFZ : 0M442LA Motor Power KW : 370.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0Tolerance bar : \leftarrow 0.1

Overflow quantity

min. l/h : 225
Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

rer values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 5.05 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 20.00 Tolerance mm : +- 1.00

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315 Tolerance : **←** 0.50

Check

tolerance $^{\circ}NW$: \leftarrow 0.75

Start of delivery mark

Tolerance : **←** 0.10

Check

tolerance "NW : +- 0.75

Barrel no. : 8

BASIC SETTING

+	
Rack travel in mm : 15.60 + Tolerance mm : + 0.05 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 270.0	Rated speed rpm : 1030 Ameroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 1200 Del. quantity cm3/1000 strokes : 270.0
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000S. : +- 4.0 Spreed
Tolerance cm3/1000 strokes : 5.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000S. : 9.0
Check tolerance cm3/1000s. : 9.0	cm3/1000S. : 9.0
 ‡	CONTROL LEVER
Rated speed rpm : 550	control lever position degree : 88.0
Rack travel in mm: 4.00 + Tolerance mm: + 0.10	tolerance degree : +- 4.0
Del. quantity + cm3/1000 strokes : 19.0 + Tolerance +	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : + 3.0 + Check tolerance +	Rated speed rpm : 1070 Tolerance 1/min : +- 1
cm3/1000s. : +- 6.0 +- Spreed +- Tolerance +-	rack travel mm : 14.60 Rated speed rpm : 1110
cm3/1000 strokes : 8.0 + Check tolerance	Rated speed rpm : 1110 Tolerance 1/min : +- 4 rack travel mm : 4.00
cm3/1000s. : 12.0	rack travel mm : 0.85
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance mm : +- 0.55 Rated speed rpm : 1200
	Rated speed rpm : 1071 Tolerance 1/min : + 1
GUIDE SLEEVE POSITION +	rack travel mm : 14.60
control lever position degree : -3 Rated speed rpm : 800	Rated speed rpm : 1111 Tolerance 1/min : +- 4 rack travel mm : 4.00
Rack travel in mm : 0.50 Tolerance mm : + 0.20	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1200
governor spring pre-tension click setting x : 2.00	Rated speed rpm : 1072 Tolerance 1/min : +- 1
	rack travel mm : 14.60

Rated speed rpm Tolerance 1/min rack travel mm	: 4	Testing:
		Rated speed rpm : 550 rack travel mm : 4.00
rack travel mm Tolerance mm Rated speed rpm	: 0.85 : ← 0.55 : 1200	rack travel mm : 4.00 Tolerance mm : + 0.10
		rack travel mm : 2.00 Rated speed rpm : 570
Rated speed rpm Tolerance 1/min	: 1073 : + 1	Rated speed rpm : 570 Tolerance 1/min : + 30
rack travel mm	: 14.60	SET IDLE AUXILIARY SPRING
Rated speed rpm Tolerance 1/min rack travel mm	: 1113 : ← 4 : 4.00	rack travel mm : 2.00
		TORQUE CONTROL
rack travel mm Tolerance mm	: U.85 : +- G.55	Rated speed rpm : 1030 - rack travel mm : 15.60
Rated speed rpm	: 1200	+ Tolerance mm : +- 0.05
Dated aread now	. 407/	Rated speed rpm : 600 - rack travel mm : 15.60 - Tolerance mm : + 0.10
Rated speed rpm Tolerance 1/min rack travel mm	· + 1	+ Tolerance mm : + 0.10
rack travel mm	: 14.60	
Rated speed rpm	: 1114	ANEROID/ALTITUDE
Tolerance 1/min rack travel mm		+ COMPENSATOR TEST
rack travel mm Tolerance mm	: 0.85	SETTING
Tolerance mm Rated speed rpm	: +- 0.55 : 1200	+ CRT ZERO POSITION
, ,		Rack travel in mm: 9.75
Rated speed rpm Tolerance 1/min	: 1175 : + 1	Tolerance mm : +- 0.15
rack travel mm		Rated speed rpm : 450
Rated speed rpm	: 1115	Pressure hPa : 1200 rack travel mm : 15.60
Tolerance 1/min rack travel mm	: 4	Tolerance mm : + 0.10
		Rated speed rpm : 450
rack travel mm Tolerance mm		Pressure hPa : - rack travel mm : 9.75
Rated speed rpm	: 1200	Tolerance mm : + 0.20
LOW IDLE		MEASUREMENT
LOW IDEE		Rated speed rpm : 450
control lever	<u></u>	Pressure hPa : 600 rack travel mm : 12.20
position degree tolerance degree	; 70.0 : +- 4.0	+ rack travel mm : 12.20 + Tolerance mm : + 0.15
		+
Setting point w/o	ar namber, shring	+ Pressure hPa : 800 + rack travel mm : 14.10
Rated speed rpm	: 100	Tolerance mm : + 0.20

CRT mm min. : > 19.50

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1200 Rated speed rpm : 600

Del. quantity

cm3/1000 strokes : 287.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000S. : +- 6.0

Aneroid pressure

hPa : Reted speed rpm : 500

Rated speed rpm Del. quantity

cm3/1000 strokes : 162.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 260.0

Tolerance

cm3/1000 strckes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 550

Rack travel in mm : 4.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 19.0

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/1000s. : \leftarrow 6.0

Spreed

Tolerance

cm3/1000 strokes : 8.0

Check tolerance

cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 10.07.98 Test ail : ISO 4113

Combination No. : 0 402 678 837

Injection pump

Pump designation : PE8P12OA320LS7911 EP type number : 0 412 628 926

Severnor

Governer design. : RSV550...1050P0A679

Governer no. : 0 421 833 598

Cust. part No. : 027 074 6502

Customer-spec. information Customer : MB-NFZ

motor Power KW : 0M442LA, Euro

: 320.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110
Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

: +- 0.10 tolerance mm

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

: 0-45-90-135-180 Phasing

: -225-270-315

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : + 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

+	
Rack travel in mm : 14.40 + Tolerance mm : + 0.05 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 227.0	Rated speed rpm : 1050 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 1100 Del. quantity cm3/1000 strokes : 227.0
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000S. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 5.0	cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Check tolerance cm3/1000S. : 9.0	
 ‡	CONTROL LEVER
Rated speed rpm : 550 Rack travel in mm : 4.20	control lever position degree : 87.0 tolerance degree : +- 4.0
Tolerance mm : + 0.10	toter ance degree . 1- 4.0
cm3/1000 strokes : 19.0	ASSEMBLY GOVERNOR SETTING
cm3/1000 strokes : + 3.0 + Check tolerance cm3/1000s. : + 6.0 + 6.0	Rated speed rpm : 1085 Tolerance 1/min : + 1 rack travel mm : 13.50
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	Rated speed ram : 1125 Tolerance 1/min : +- 4 rack travel mm : 4.00
cm3/1000s. : 12.0	rack travel mm : 0.85 Tolerance mm : +- 0.55
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1300
GUIDE SLEEVE POSITION	Rated speed rpm : 1087 Tolerance 1/min : +- 1 rack travel mm : 13.50
control lever position degree : -3 Rated speed rpm : 800	Rated speed rpm : 1127 Tolerance 1/min : +- 4 rack travel mm : 4.00
Rack travel in mm : 0.50 + Tolerance mm : + 0.20	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
governor spring pre-tension click setting x : 2.00	Rated speed rpm : 1089 Tolerance 1/min : +- 1 rack travel mm : 13.50

Rated speed rpm	: 1129	+
Tolerance 1/min	: +- 4	+ rack travel mm :
rack travel mm	: 4.00	+ Rated speed rpm : 5
		+ Tolerance 1/min : +-
rack travel mm	: 0.85	}
Tolerance mm		+ SET IDLE AUXILIARY SPRIM
Rated speed rpm		4
		rack travel mm :
		1
Rated speed rpm	: 1091	<u> </u>
Tolerance 1/min	: - 1	↓ TORQUE CONTROL
rack travel mm	: 13.50	+ Rated speed rpm : 10
ruck travet him	. 15.50	+ rack travel mm : 1
Rated speed rpm	• 1131	+ Tolerance mm : +-
Tolerance 1/min	· - 1131	T rocerance min
rack travel mm	: 4.00	T Dated around rom
rack travet mm	. 4.00	Rated speed rpm : 6
	0.05	+ Tolerance mm : +-
rack travel mm	: 0.85 : +- 0.55	†
Tolerance mm	: +- 0.55	
Rated speed rpm	: 1300	+ ANEROID/ALTITUDE
		+ COMPENSATOR TEST
		+
Rated speed rpm	: 10 9 3	+
Tolerance 1/min		+ SETTING
rack travel min	: 13.50	}
		Rated speed rpm : 4
Rated speed rpm	: 1133	+ Pressure hPa : 11
Tolerance 1/min	: +- 4	rack travel mm :
Tolerance 1/min rack travel mm	: 4.00	+ Tolerance mm : +-
rack crayes han		1 Total dile IIIII
rack travel mm	: 0.85	Rated speed rpm : 4
Tolerance mm	. 0.65	Pressure hPa :
Rated speed rpm	. 1300	*
kated speed rpiii	. 1300	+ rack travel mm : 1
		+ Tolerance mm : +-
Saka di amandi dasa	4005	2452 01 10 5045
Rated speed rpm		+ MEASUREMENT
Tolerance 1/min	: +- 1	†
rack travel mm	: 13.50	+ Rated speed rpm : 4
	4470	†
Rated speed rpm	: 1135	+ Pressure hPa : 7
Tolerance 1/min	: +- 4	+ rack travel mm : 1
rack travel mm	: 4.00	+ Tolerance mm : +-
	_	+
rack travel mm		+ Pressure hPa : 5
Tolerance mm		+ rack travel mm : 1
Rated speed rpm	: 1300	+ Tolerance mm : +-
		
		
LOW IDLE		
		↓ FUEL DELIVERY CHARACTER!
		TOTAL PERFECTION OF THE PERFEC
control lever		
position degree	• 71 0	Aneroid pressure
tolerance degree		+ hPa : 11
toterance degree	• • •••	· · · · · · · · · · · · · · · · · · ·
		+ Rated speed rpm : 6

580 30 ING 2.00 1050 14.40 0.05 600 0.10 450 100 15.00 0.10 450 11.10 0.20 450 750 14.30 0.20 550 12.50 0.15 RISTICS 100 600 Rated speed rpm Del. quantity cm3/1000 strokes : 248.0 Tolerance cm3/1000 strokes : +- 2.0

2.00

Testing:

Rated speed rpm : 550 rack travel mm : 4.20 Tolerance mm : + 0.10

Check tolerance cm3/1000s. Spreed	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	8.0
cm3/1000s.	:	12.0

Aneroid pressure			
hPa	:		_
Rated speed rpm	:		500
Del. quantity			
cm3/1000 strokes	:		166.0
Tolerance			
cm3/1000 strokes	:	+	2.0
Check tolerance			
cm3/1000s.	:	+-	5.0

STARTING FUEL DELIVERY

Rated speed rom	:	100
	:	250.0
Tolerance cm3/1000 strokes	: +-	15.0
Check tolerance cm3/1000s.	: +-	79.0

LOW IDLE

Rated speed rpm	:	550	
Rack travel in mm Tolerance mm Del. quantity	: : +-	4.20 0.10	
cm3/1000 strokes	:	19.0	
cm3/1000 strokes Check tolerance	: +-	3.0	
cm3/1000s.	: +-	6.0	
Tolerance cm3/1000 strokes	:	8.0	
Check tolerance cm3/1000s.	:	12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 10.07.98 Test oil : 10.07.98

Combination No. : 9 402 678 839

Injection pump

Pump designation : PE8P120A320LS7912 EP type number : 0 412 628 927

Governor

Governer design. : RSV550...1050P0A681

Governer no. : 0 421 833 600

Cust. part No. : 028 074 2802

Customer-spec. information

Customer : MB-NFZ

Motor : OM402LA, Euro Power KW : 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C temp. °C : 40
Tolerance °C : + 2.0 40

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 120
Tolerance L/h : +- 20.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.55
Tolerance mm : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 20.50 Tolerance mm : \leftarrow 0.50

Firing order : 8-7-2-6-3

: - 5- 4- 1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : \leftarrow 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10 Check

tolerance °NW : +- 0.75

Barrel no. : 8

BASIC SETTING

Rated speed rpm : 1030

Rack travel in mm : 13.70 Tolerance mm : + 0.05	Aneroid pressure hPa : 1000 Del. quantity cm3/1000 strokes : 208.0
Del. quantity cm3/1000 strokes : 208.0	Tolerance cm3/1000 strokes : +- 1.0
Tolerance cm3/1000 strokes : + 1.0	Check tolerance cm3/1000S. : +- 4.0 Spreed
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : 5.0 Check tolerance
Spreed	cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	CONTROL LEVER
Check tolerance cm3/1000s. : 9.0	control lever position degree : 88.0 tolerance degree : +- 4.0
Rated speed rpm : 550	ASSEMBLY GOVERNOR SETTING
Rack travel in mm: 4.10 Tolerance mm: + 0.10 Del. quantity	Rated speed rpm : 1070 Tolerance 1/min : +- 1 rack travel mm : 12.70
cm3/1000 strokes : 18.0	Rated speed rpm : 1110
cm3/1000 strokes : + 3.0 + Check tolerance cm3/1000s. : + 6.0 +	Tolerance 1/min : +- 4 rack travel mm : 4.00
Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
cm3/1000s. : 12.0 + Cm3/1000s. : 12.0 + Cm3/1000s. : 12.0 + Cm3/1000s. : 12.0 + Cm3/1000s. : 12.0 + Cm3/1000s.	Rated speed rpm : 1071 Tolerance 1/min : + 1 rack travel mm : 12.70
WITH GOVERNOR	Rated speed rpm : 1111
GUIDE SLEEVE POSITION +	Tolerance 1/min : +- 4 rack travel mm : 4.00
control lever position degree : - 3	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1300
Rated speed rpm : 800	Rated speed rpm : 1072
Rack travel in mm: 0.50 Tolerance mm: + 0.20	Tolerance 1/min : + 1 rack travel mm : 12.70
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 1112 Tolerance 1/min : +- 4 rack travel mm : 4.00
Rated speed rpm : 1030	rack travel mm : 0.85

Tolerance mm Rated speed rpm		Tolerance mm : +- 0.10
	+	Rated speed rpm : 575
Rated speed rpm	: 1073	Tolerance 1/min : + 30
Tolerance 1/min	: 1 +	
rack travel mm	: 12.70	SET IDLE AUXILIARY SPRING
Rated speed rpm	· 1113	rack travel mm : 2.00
Tolerance 1/min	+ 114	. 2.00
rack travel mm		
	1	TORQUE CONTROL
rack travel mm	: 0.35	Rated speed rpm : 1030
Tolerance mm		rack travel mm : 13.70
Rated speed rpm		Tolerance mm : + 0.05
• • • •	+	
	1	Rated speed rpm : 600
Rated speed rpm	: 1074	rack travel mm : 14.70 Tolerance mm : +- 0.10
Tolerance 1/min		Tolerance mm : +- 0.10
rack travel mm		, , , , , , , , , , , , , , , , , , , ,
	+	Rated speed rpm : 900
Rated speed rpm	: 1114	rack travel mm : 14.20
Tolerance 1/min		Tolerance mm : + 0.10
rack travel mm		- · · · -
	+	
		ANEROID/ALTITUDE
Tolerance mm	: +- 0.55 +	COMPENSATOR TEST
Rated speed rpm	: 1300	
•	+	
	+	SETTING
Rated speed rpm	: 1075	
Tolerance 1/min		Rated speed rpm : 450
rack travel mm		Pressure hPa : 1000
	+	rack travel mm : 14.70
Rated speed rpm	: 1715	Tolerance mm : +- 0.15
Tolerance 1/min		
rack travel mm		Rated speed rpm : 450
	+	Rated speed rpm : 450 Pressure hPa : -
rack travel mm	: 0.85	
Tolerance mm	· + 0.55	rack travel mm : 12.40 Tolerance mm : +- 0.15
Rated speed rpm		
•	+	MEASUREMENT
		
LOW IDLE	+	Rated speed rpm : 450
	+	
	+	Pressure hPa : 750 rack travel mm : 14.00 Tolerance mm : +- 0.15
control lever	<u> </u>	rack travel mm : 14.00
position degree	: 71.0 +	Tolerance mm : +- 0.15
tolerance degree	: + 4.0 +	
-	· · · · · · · · · · · · · · · · · · ·	Pressure hPa : 650
Setting point w/ou	it bumper spring +	rack travel mm : 13.40
Dakad sarad	100	Tolerance mm : +- 0.15
Rated speed rpm	: 100	
CRT mm min.	:>19.50	
	1	FUEL DELIVERY CHARACTERISTICS
Testing:	+	
-	+	
Rated speed rpm		Aneroid pressure
rack travel mm	: 4.10	hPa : 1000

H25

Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000S. Spreed Tolerance cm3/1000 strokes Check tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: 600 : 240.0 : ← 2.0 : ← 5.0 : 8.0 : 12.0
rack travel mm Tolerance mm	: +- 0.10
Aneroid pressure hPa	;
Rated speed rpm Del. quantity	: 500
cm3/1000 strokes Tolerance	: 170.0
cm3/1000 strokes Check tolerance	: ← 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance cm3/1000 strokes	: 8.0
Check tolerance cm3/1000S.	: 12.0
STARTING FUEL DEL	
Rated speed rpm	: 100
Del. quantity cm3/1000 strokes	: 220.0
Tolerance cm3/1000 strokes	: +- 15.0
Check tolerance cm3/1000S.	: ← 19.0
LOW IDLE	
Rated speed rpm	: 550
Rack travel in mm Tolerance mm Del. quantity	: 4.10 : + 0.10
cm3/1000 strokes Tolerance	: 18.0
cm3/1000 strokes Check tolerance	: +- 3.0
cm3/1000S.	: 6.0

Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

End of test specification sheet

H26

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 01.10.97 Edition : ISO 4113 Test oil

Sembination No. : 0 402 646 781

Injection pump

Pump designation : PE6P120A320LS7854 EP type number : 0 412 626 872

Sovemor

Governer design. : RQV350...950PA1118

Governer no. : 0 421 814 081

Cust. part No. : 0250742002

Customer-spec. information Customer : MB-NFZ : 0M441 LA Motor Power KW : 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity
min. l/h : 140
Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 6-3-5-2-4-

: 1

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.30

Check

tolerance °NW : +- 0.75

Start of delivery mark

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 950

Rack travel in mm : 14.50

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes	· 252 በ	+ Tolerance mm : +-	0.25
Tolerance		Rated speed rpm : guide sleeve	720
cm3/1000 strokes	10		4.94
CIID/ 1000 Strokes	: +- 1.0		
01 - 1 4 4		+ Tolerance mm : +-	0.25
Check tolerance		†	
cm3/1000s.	: +- 4.0	+ Rated speed rpm :	1210
		+ guide sleeve	
Spreed		+ travel mm :	13.50
			0.50
Tolerance		1	0.50
cm3/1000 strokes	. 5.0	1	
CIID/ 1000 STI OKES	. 5.0	GUIDE SLEEVE POSITION	
Check tolerance		- T GOIDE SCEENE LOSTITON	
	. 0.0	T	
cm3/1000s.	: 9.0	†	
		+ control lever	_
		+ position degree : -	7
		+ Rated speed rpm :	1080
Rated speed rpm	: 350	+	
•		+ Rack travel in mm :	13.50
Rack travel in mm	n: 5.40	+ Tolerance mm : +	
Tolerance mm		The state of the s	, .
Del. quantity			
	. 10.0	FILL LOAD OF THESE AT	THE LOSS STOR
cm3/1000 strokes	: 19.0	+ FULL LOAD DELIVERY AT	FULL LUAD STUP
Tolerance	. 3.5	†	050
cm3/1000 strokes	: +- 3.0	+ Rated speed rpm :	950
Check tolerance		+ Aneroid pressure	
cm3/1000s.	: ← 6.0		1230
Spreed		+ Del. quantity	
Tolerance		+ cm3/1000 strokes :	252.0
cm3/1000 strokes	: 6.0	+ Tolerance	
Check tolerance	- · -	+ cm3/1000 strokes : +-	- 1.0
cm3/1000s.	: 10.0	- Check tolerance	.,.
5.1157 TOGGS.	. 10.0		- 4.0
			4.0
(D) OFTTHE A	HEATTON NAS	+ Spreed	
(B) SETTING OF IN	MECLION BOWLE	† Tolerance	F 6
WITH GOVERNOR		+ cm3/1000 strokes :	5.0
		+ Check tolerance	
		- + cm3/1000s. :	9.0
GUIDE SLEEVE TRAV	/EL	+	
= ···		+	
Rated speed rpm	: 1010	<u> </u>	
guide sleeve	· · · · · · · · · · · · · · · · · · ·	CONTROL LEVER	
travel mm	: 9.49	-	
Tolerance mm	: +- 0.15	control lever	
TOTAL DE THE	. +- 0.13		107.0
Dakad amiridi	350	position degree :	
Rated speed rpm	: 350	tolerance degree : +-	- 4.0
guide sleeve		†	
travel mm	: 1.22	+ RATED SPEED	
Tolerance mm	: +- 0.20	+ rack travel mm :	13.50
		+ Rated speed rpm :	995
Rated speed rpm	: 403	+ Tolerance 1/min : +-	_
guide sleeve	. **	+	-
travel mm	: 1.97	rack travel mm :	4.00
Tolerance mm	: +- 0.25		1075
TOTAL DISCLOSING	رع. ن		_
Dakad an	. 157	+ Tolerance 1/min : +-	- 15
Rated speed rpm	: 453	†	0.70
guide sleeve		+ rack travel mm :	0.70
travel mm	: 2.56	+ Tolerance mm : +-	0.70
		•	

Rated speed rpm : 1200	+ Pressure hPa : 600 + rack travel mm : 2.60 + Tolerance mm : + 0.10
LOW IDLE	Start interlock
control lever position degree : 68.0	Rated speed rpm : > 100 Rated speed rpm : < 270
tolerance degree : +- 4.0	Check :> 80
Setting point w/out bumper spring	+ Check + speed 1/min : < 290
Rated speed rpm : 250	Ţ
CRT mm min. : > 9.00	+ FUEL DELIVERY CHARACTERISTICS
Testing:	Aneroid pressure
Rated speed rpm : 350	+ hPa : 1200
rack travel mm : 5.40	Rated speed rpm : 600
Tolerance mm : +- 0.10	+ Del. quantity
Rated speed rpm : 400	+ Tolerance
	+ cm3/1000 strokes : +- 2.0
TORQUE CONTROL	+ Check tolerance + cm3/1000s. : + 5.0
Rated speed rpm : 950	+ Spreed
rack travel imm : 14.50	Tolerance
Tolerance mm : +- 0.05	+ cm3/1000 strokes : 8.0
Total di loc man	+ Check tolerance
Rated speed rpm : 600	+ cm3/1000s. : 12.0
rack travel mm : 14.50	+
Rated speed rpm : 600 rack travel mm : 14.50 Tolerance mm : 15 0.05	
	+ Aneroid pressure
	+ hPa : -
ANEROID/ALTITUDE	+ Rated speed rpm : 500
COMPENSATOR TEST	+ Del. quantity
	+ cm3/1000 strokes : 136.0 + Tolerance
SETTING	+ cm3/1000 strokes : +- 1.0
	Check tolerance
CRT ZERO POSITION	+ cm3/1000s. : +- 4.0
	+ Spreed
Rack travel in mm : 10.25	† Tolerance
Tolerance mm : + 0.15	+ cm3/1000 strokes : 8.0
	+ Check tolerance
Rated speed rpm : 500 Pressure hPa : -	+ cm3/1000s. : 12.0
Rated speed rpm : 500	
Pressure hPa : 350	+ STARTING FUEL DELIVERY
rack travel mm : 1.35	+
Tolerance mm : +- 0.05	+ Rated speed rpm : 100
	+ Del. quantity
MEASUREMENT	+ cm3/1000 strokes : 245.0
Rated aread area : 500	+ Tolerance
Rated speed rpm : 500	+ cm3/1000 strokes : +- 10.0 +

Check tolerance cm3/1000S. : + 14.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 5.40
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 19.0
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 6.0

Check tolerance cm3/1000s.

End of test specification sheet

: 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 26.09.97 Test oil : ISO 4113

Combination No. : 0 402 648 780

Injection pump

Pump designation : PE8P12OA32OLS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: -2K

Governer no. : 0 421 815 548

Cust. part No. : 988 04 47

Customer—spec. information Customer : LIEBHERR

Motor : D 9408 TI-EA3

Power KW : 420.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 230 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.65
Tolerance mm : +- 0.05

Check

tolerance min : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-8-7- 2- 6

: - 3- 5- 4

Phasing : 0-45-90-135-180 : -225-270-315

: +- 0.50

Tolerance Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.65

Tolerance mm : + 0.05

Del. quantity cm3/1000 strokes : 295.0

Tolerance

cm3/1000 strokes : +- 1.0

J03

Check tolerance cm3/1000s. : +- 4.0	<u> </u>
Spreed	_ + GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1180
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 12.50 Tolerance mm : +- 2.70
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.50 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +- 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000 strokes : 10.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	Rated speed rpm : 1050 Aneroid pressure hPa : 1600 Del. quantity cm3/1000 strokes : 295.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 9.0
	CONTROL LEVER
GUIDE SLEEVE TRAVEL Rated speed rpm : 1117 guide sleeve travel mm : 10.27 Tolerance mm : +- 0.15 Rated speed rpm : 300 guide sleeve travel mm : 1.11 Tolerance mm : +- 0.20	control lever position degree : 121.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.65 Rated speed rpm : 1110 Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 1200
Rated speed rpm : 755 guide sleeve travel mm : 6.17 Tolerance mm : +- 0.25 Rated speed rpm : 480 guide sleeve	Tolerance 1/min : +- 15 rack travel mm : 0.50 Tolerance mm : +- 0.50 Rated speed rpm : 1300
travel mm : 3.75 Tolerance mm : +- 0.25 Rated speed rpm : 1330	LOW IDLE
guide sleeve	+ control lever

ting point w/c	out bumper spring	† Tolerance mm	: +- 0.05
ting point wit	at bumper spring	Pressure hPa	: 700
ed speed rpm	: 250	rack travel mm Tolerance mm	: 9.50
m min.	: > 6.60		. 0.20
ng:		Start interlock	
l speed rpm	: 350 : 5.50 : + 0.10	Rated speed rpm	: > 100
ravel mm	: 5.50	+ Rated speed rpm + Rated speed rpm	: < 270
ance mm	: +- 0.10	+	
		+ Check	
kú speed ripini –	: 400	+ speed 1/min	: > 80
		+ Check	
		- + speed 1/min	: < 290
E CONTROL		+	
speed rpm	: 1050	+	
ravel mm	: 12.65 : ← 0.05	+ FUEL DELIVERY CHA	RACTERISTICS
ance mm	: 0.05	+	
		+	
d speed rpm	: 500	+ Aneroid pressure	
travel mm	: 10.00	+ hPa	: 1600
ince mm	: ← 0.10	Rated speed rpm	: 500
		+ Del. quantity	
speed rpm		+ cm3/1000 strokes	: 276.0
ravel mm	: 11.80	+ Tolerance	
nce mm	: - 0.10	+ cm3/1000 strokes	: ← 3.0
		+ Check tolerance	
speed rpm	: 950	→ cm3/1000s.	: +- 6.0
avel mm	: 12.20	+	
ince mm	: - 0.10	+	
		+ Aneroid pressure	
speed rpm	: 600	+ hPa	: 1600
	: 10.80	- Rated speed rpm	: 800
ince mm	: +- 0.20	+ rack travel mm	: 11.80
		+ Tolerance mm	
		→ Del. quantity	
ID/ALTITUDE		+ cm3/1000 strokes	: 299.0
NSATOR TEST		+ Tolerance	
		+ cm3/1000 strokes	: +- 3.0
		+ Check tolerance	
V G		cm3/1000s.	: +- 6.0
speed rpm	: 1050	†	
speed rpiii	: 1600	I Approid procesure	
ravel mm	: 12.65	+ Aneroid pressure + hPa	• =
ravet mm nce mm	: + 0.05	+ nra + Rated speed rpm	. 550
HICE IMB	. 0.05		. 550
speed rpm	. 1050	+ Del. quantity + cm3/1000 strokes	. 200.0
speed rpm re hPa	: 1050	+ CM3/1000 Strokes + Tolerance	. 207.0
re nra ravel mm		+ cm3/1000 strokes	10
avet infi	: 6.30 : +- 0.20		: +- 1.0
ice iniii	. — 0.20	Check tolerance	/ ^
TMC NT		+ cm3/1000s.	: +- 4.0
EMENT		+ Spreed	
	. 4050	Tolerance	
speed rpm	: 1050	+ cm3/1000 strokes	: 8.0
	4050	+ Check tolerance	40.5
hPa	: 1050 : 11.80	+ cm3/1000s.	: 12.0
		•	

STARTING FUEL DELIVERY

Rated speed rpm : 100 9.20 rack travel mm : Tolerance mm : **←** 0.30 Del. quantity cm3/1000 strokes : 150.0

Tolerance

cm3/1000 strokes : \leftarrow 15.0

Check tolerance

: +- 19.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 350 5.50 Rack travel in mm : Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 : +-Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.09.97 : ISO 4113

Combination No. : 0 402 648 780A

Injection pump

Pump designation : PE8P120A320LS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV3C0...1050PA1078

: -2K

: 0 421 815 548 Governer no.

Cust. part No. : 988 04 47

Customer-spec. information

Customer : LIEBHERR

Motor : D 9403 TI-EA3

Power KW : 420.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C Tolerance °C : + 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 3 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : **←** 0.50

Check

tolerance °NW : + 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm: 12.65

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 295.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s. : ← 4.0

Spreed

Tolerance cm3/1000 strokes : 5.0	control lever position degree : - 1 Rated speed rpm : 1182
Check tolerance cm3/1000s. : 9.0	Rack travel in mm : 12.48 Tolerance mm : +- 1.30
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.50 Tolerance mm: + 0.10 Del. quantity	Rated speed rpm : 1050 Aneroid pressure hFa : 1600
cm3/1000 strokes : 30.0 + Tolerance +	Del. quantity cm3/1000 strokes : 295.0
cm3/1000 strokes : + 3.0 + Check tolerance +	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : + 6.0 + Spreed	Check tolerance $cm3/1000s$. : \leftarrow 4.0
Tolerance cm3/1000 strokes : 6.0	Spreed Tolerance
Check tolerance + cm3/1000s. : 10.0 +	cm3/1000 strokes : 5.0 Check tolerance
(D) CETTANG OF TALLECTYON DIMED	cm3/1000\$. : 9.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	control lever position degree : 121.0
Rated speed rpm : 1117	tolerance degree : +- 4.0
travel mm : 10.27 +	RATED SPEED
Tolerance mm : +- 0.15	rack travel mm : 11.65 Rated speed rpm : 1110
Rated speed rpm : 300 + guide sleeve +	Tolerance 1/min : +- 5
travel mm : 1.11	rack travel mm : 4.00
Tolerance mm : + 0.29	Rated speed rpm : 1200 Tolerance 1/min : +- 15
Rated speed rpm : 755 + guide sleeve +	rack travel mm : 0.50
travel mm : 6.17 +	Tolerance mm : \leftarrow 0.50
Tolerance mm : + 0.25	Rated speed rpm : 1300
Rated speed rpm : 480 + guide steeve +	
travel mm : 3.75	LOUITOUS
Tolerance mm : + 0.25	LOW IDLE
Rated speed rpm : 1330 + guide sleeve +	control lever
travel mm : 13.50 +	position degree : 71.0
Tolerance mm : + 0.50	tolerance degree : +- 4.0
GUIDE SLEEVE POSITION	Setting point w/out bumper spring

Rated speed rpm

300

CRT mm min.	: > 6.00
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 5.50 : +- 0.10
Rated speed rpm	: 400
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 1050 : 12.65 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 500 : 10.00 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 800 : 11.80 : + 0.10
Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 600 : 10.80 : ← 0.20
ANEROID/ALTITUDE COMPENSATOR TEST	······································
SETTING	
Rated speed rpm Pressure hPa rack travel imm Tolerance mm	: 1050 : 1600 : 12.65 : + 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 1050 : - : 8.30 : + 0.20
MEASUREMENT	
MEASUREMENT Rated speed rpm	: 1050
	: 1050 : 1050 : 11.80 : ← 0.05

	: 0.20
Start interlock	<u> </u>
Rated speed rpm Rated speed rpm	: > 100 : < 270
Check speed 1/min	: > 80
Check speed 1/min	: < 290
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure	. 1460
Rated speed rpm Del. quantity	: 1600 : 500
cm3/1000 strokes Tolerance	: 276.0
cm3/1000 strokes Check tolerance	: ← 3.0
cm3/1000s.	: ← 6.0
Aneroid pressure	. 1460
Rated speed rpm	: 1600 : 800
rack travel mm Tolerance mm	: 11.80 : + 0.10
Del. quantity cm3/1000 strokes	: 299.0
Tolerance cm3/1000 strokes	: +- 3.0
Check tolerance cm3/1000s.	: ← 6.0
Aneroid pressure	
hPa Rated speed rpm	: – : 550
Del. quantity cm3/1000 strokes	: 209.0
Tolerance cm3/1000 strokes	: +- 1.0
Check tolerance cm3/1000s.	: +- 4.0
Spreed Tolerance	2
	: 8.0
cm3/1000 strokes Check tolerance	

J09

Rated speed rpm : 100
rack travel mm : 10.00
Tolerance mm : + 0.30
Del. quantity
cm3/1000 strokes : 150.0
Tolerance
cm3/1000 strokes : + 15.0
Check tolerance
cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm : 5.5

Rack travel in mm: 5.50
Tolerance mm: + 0.10
Del. quantity

cm3/1000 strokes : 30.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance cm3/1000s. : +- 6.0

Spreed Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 26.09.97 : ISO 4113

Combination No. : 0 402 648 967

Injection pump

Pump designation : PE8P120A320LS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: -1K

Governer no. : 0 421 815 361

Cust. part No. : 9275447

Customer-spec. information Customer : LIEBHERR : D 9408 TI Motor Power KW : 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

: 40

Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 047

Inlet press. bar : 2.0

Tolerance bar $: \leftarrow 0.1$

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : + 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter: 3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : + 0.50

Firing order : 1-8-7-2-6

: - 3- 5- 4

Phasing : 0-45-90-135-130

: -225-270-315 : +- 0.50

Check

Tolerance

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75

Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 300.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s.

: **←** 4.0

Spreed

	+ Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1320
	guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 13.50 Tolerance mm : + 0.50
	CHARE SI FEME DOCUTION
Rated speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm: 5.30	- control lever
Tolerance mm : + 0.10	position degree : - 1
Del. quantity	+ Rated speed rpm : 1185
cm3/1000 strokes : 30.0 Tolerance	Pools trough in my . 10.90
cm3/1000 strokes : +- 3.0	+ Rack travel in mm : 10.80 + Tolerance mm : + 2.70
Check tolerance	Total disce initi
cm3/1000S. : +- 6.0	<u> </u>
Spreed	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance	+
cm3/1000 strokes : 6.0	Rated speed rpm : 1050
Check tolerance cm3/1000s. : 10.0	+ Aneroid pressure + hPa : 1600
, , , , , , , , , , , , , , , , , , ,	Del. quantity
	- cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP	+ Tolerance
WITH GOVERNOR	+ cm3/1000 strokes : + 1.0
	+ Check tolerance + cm3/1000S. : +- 4.0
GUIDE SLEEVE TRAVEL	Spreed
SOLDE SELECT HIMACE	+ Tolerance
Rated speed rpm : 1117	- cm3/1000 strokes : 5.0
guide sleeve	+ Check tolerance
travel mm : 10.38	+ cm3/1000s. : 9.0
Tolerance mm : +- 0.25	1
Rated speed rpm : 300	
guia. sleeve	CONTROL LEVER
trass. mm : 1.69	+
Tolerance mm : +- 0.25	+ control lever
Rated speed rpm : 746	position degree : 119.0 tolerance degree : + 4.0
guide sleeve	+ total ance degree . + 4.0
travel mm : 6.20	RATED SPEED
Tolerance mm : + 0.25	rack travel mm : 11.75
- · · · ·	Rated speed rpm : 1110
Rated speed rpm : 353	Tolerance 1/min : +- 5
guide sleeve travel mm : 2.45	rack travel mm : 4.00
Tolerance mm : +- 0.25	Rated speed rpm : 1200
	Tolerance 1/min : +- 15
Rated speed rpm : 403	+
guide sleeve	+ rack travel mm : 0.50
travel mm : 3.18 Tolerance mm : +- 0.25	Tolerance mm : +- 0.50
TO CEL GITTUE TIME : TO U.25	+ Rated speed rpm : 1300
Rated speed rpm : 450	1
guide sleeve	+
travel mm : 3.66	+

		. I	
LOW IDLE		# MEASUREMENT	
control lever		Rated speed rpm	
position degree	. 70.0	T Pressure hPa	. 475
tolerance degree	. 70.0	T FIESSULE IIFA	. 013
toterance degree	. +- 4.0	Tolonopoo m	
Setting point w/c	out bumper spring	Pressure hPa rack travel mm Tolerance mm	: +- 0.05
		+ Pressure hPa	
Rated speed rpm	: 250	∔ rack travel mm	
		+ Tolerance mm	: +- 0.15
CRT mm min.	: > 6.60	1	
Testing:		Ī	
	750	+ FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 350	†	
rack travel mm	: 5.30	+	
Tolerance mm	: 0.10	+ Aneroid pressure	
		+ hPa	: 1600
Rated speed rpm	: 400	Rated speed rpm	: 500
		→ Del. quantity	
		+ cm3/1000 strokes	: 298.0
TORQUE CONTROL		+ Tolerance	
Rated speed rpm rack travel mm Tolerance mm	: 1050	+ cm3/1000 strokes	: +- 3.0
rack travel mm	: 12.75	+ Check tolerance	
folerance mm	: +- 0.05	+ cm3/1000s.	: +- 6.0
		1	. 0.0
Rated speed rpm	: 500	<u> </u>	
rack travel mm		+ rack travel mm	• 10.50
Tolerance mm	: +- 0.10	+ Tolerance mm	
ocerance in	0.10	T roter arite iniii	. , 0.10
Pated speed rom	. 550		
Rated speed rpm rack travel mm	. 10.50	Aneroid pressure	
rack travel mm Tolerance mm	: + 0.10		: 1600
ioterance inm	: +- 0.10	+ hPa	1000
	. 700	Rated speed rpm	: 700
Rated speed rpm rack travel mm	: 700	+ Del. quantity	200.0
rack travel mm	: 17.40	+ cm3/1000 strokes	: 299.0
Tolerance mm	: +- 0.70	+ Tolerance	
	050	+ cm3/1000 strokes	: ← 3.0
Rated speed rpm		+ Check tolerance	
rack travel mm		+ cm3/1000s.	: ← 6.0
Tolerance mm	: ← 0.15	+	
		+ Aneroid pressure	
ANEROID/ALTITUDE		+ hPa	: -
COMPENSATOR TEST		+ Rated speed rpm	: 550
		+ Del. quantity	. 550
		+ cm3/1000 strokes	: 242.5
SETTING		Tolerance	
		cm3/1000 strokes	: +- 1.5
Rated speed rpm	: 550	+ Check tolerance	
Pressure hPa	: 1600	+ cm3/1000s.	: +- 4.0
rack travel mm	: 10.50	Spreed	7.0
Tolerance mm	: +- 0.10	+ Tolerance	
ocerance min	. 1 0.10		: 8.0
3040d opend pro-	. 550	+ cm3/1000 strokes	. 0.0
Rated speed rpm	: 550	+ Check tolerance	40.0
ressure hPa	0.45	+ cm3/1000s.	: 12.0
ack travel mm	: 9.15	+	
147			

Tolerance mm : +- 0.20

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.15 Tolerance mm : + 0.30 Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : +- 10.0

LOW IDLE

cm3/1000s.

Rated speed rpm : 350 Rack travel in mm: 5.30 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 scrokes : - 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance

End of test specification sheet

10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 26.09.97 : ISO 4113

Sembination No. : 0 402 648 967A

Injection pump

Pump designation : PE8P120A320LS7871 EP type number : 0 412 628 877

Governor

Governer design. : RQV300...1050PA1078

: -1K

Governer no.

: 0 421 815 361

Cust. part No. : 9275448

Customer-spec. information Customer : LIEBHERR

Motor

: D 9408 TI

Power KW

: 400.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

Tolerance °C

: **←** 2.0

Overflow valve : 1 417 413 047

Inlet press. bar :

2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar

: +- 1.5

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.65
Tolerance mm : ÷- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50

Tolerance mm

Firing order

: +- 0.50

: 1-8-7-2-6

: - 3- 5- 4

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 12.75

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes :

300.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

+	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1320 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 13.50 Tolerance mm : +- 0.50
Rated speed rpm : 350	GUIDE SLEEVE POSITION
Rack travel in mm : 5.30 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 30.0	control lever position degree : - 1 Rated speed rpm : 1185
Tolerance + 3.0 + Check tolerance +	Rack travel in mm : 10.80 Tolerance mm : +- 2.70
cm3/1000s. : + 6.0 + Spreed + Tolerance +	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 6.0 + Check tolerance + cm3/1000s. : 10.0 +	Rated speed rpm : 1050 Aneroid pressure hPa : 1600
cm3/1000s. : 10.0	Del. quantity cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000S. : ⊹— 4.0 Spreed Tolerance
Rated speed rpm : 1117 guide sleeve	cm3/1000 strokes : 5.0 Check tolerance
guide sleeve travel mm : 10.38 Tolerance mm : +- 0.25	cm3/1000S. : 9.0
Rated speed rpm : 300 + guide sleeve + travel mm : 1.69 +	CONTROL LEVER
Tolerance mm : + 0.25 Rated speed rpm : 746	control lever position degree : 119.0 tolerance degree : +- 4.0
guide sleeve travel mm : 6.20 + Tolerance mm : + 0.25	RATED SPEED rack travel mm : 11.75 Rated speed rpm : 1110
Rated speed rpm : 353 guide sleeve travel mm : 2.45	Tolerance 1/min : +- 5
Tolerance mm : +- 0.25	rack travel mm : 4.00 Rated speed rpm : 1200 Tolerance 1/min : +- 15
Rated speed rpm : 403 guide sleeve travel mm : 3.18	rack travel mm : 0.50 Tolerance mm : +- 0.50
Tolerance mm : + 0.25 Rated speed rpm : 450	Rated speed rpm : 1300
guide sleeve travel mm : 3.66	

LOW IDLE	
control lever	
	. 70.0
position degree tolerance degree	: 70.0
tolerance degree	: +- 4.0
rakkima maink/a	
Setting point w/o	ut bumper spring
Rated speed rpm	: 200
(aron open rem	. 255
CRT mm min.	: > 6.60
Testing:	
Rated speed rpm	: 350
rack travel mm	
Tolerance mm	: ← 0.10
Rated speed rpm	: 400
TORQUE CONTROL	. 1050
Rated speed rpm	
rack travel mm	: 12.75
Tolerance mm	: ← 0.05
Dated same	. 500
Rated speed rpm	: 500
rack travel mm	: 10.50
Tolerance mm	: ← 0.10
Datad annual man	. 550
Rated speed rpm	: 550
rack travel num	: 10.50
Tolerance mm	: ← 0.10
Dated speed row	. 700
Rated speed rpm	
rack travel mm	
Tolerance mm	: ← 0.10
Rated speed rpm	: 950
rack travel mm	: 930
rack travet mm Tolerance mm	: + 0.15
ioterance imm	, 0.15
ANEROID/ALTITUDE	
COMPENSATOR TEST	
SETTING	
Rated speed rpm	: 550
Pressure hPa	: 1600
rack travel mm	: 10.50
Tolerance mm	: + 0.10
	.
Rated speed rpm	: 550
Pressure hPa	:
rack travel mm	9.15
17	

+	Tolerance mm	: +- 0.20
‡	MEASUREMENT	
‡	Rated speed rpm	: 550
† † †	Pressure hPa rack travel mm Tolerance mm	: 675 : 10.35 : +- 0.05
† † †	Pressure hPa rack travel mm Tolerance mm	: 575 : 9.75 : + 0.15
++	FUEL DELIVERY CHA	RACTERISTICS
İ		
+	Aneroid pressure hPa Rated speed rpm Del. quantity	: 1600 : 500
İ	cm3/1000 strokes Tolerance	: 298.0
Ŧ	cm3/1000 strokes Check tolerance	: +- 3.0
Ŧ	cm3/1000S.	: +- 6.0
† † † †	rack travel mm Tolerance mm	: 10.50 : +- 0.10
† † † †	Aneroid pressure hPa Rated speed rpm Del. quantity	: 1600 : 700
‡	cm3/1000 strokes Tolerance	: 299.0
‡	cm3/1000 strokes Check tolerance	: +- 3.0
‡	cm3/1000s.	: +- 6.0
+++++++++++++++++++++++++++++++++++++++	Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: - : 550 : 242.5 : +- 1.5 : +- 4.0
Ŧ	Spreed Tolerance	
‡	cm3/1000 strokes Check tolerance	: 8.0
‡	cm3/1000s.	: 12.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.15 : **←** 0.30 Tolerance mm Del. quantity

cm3/1000 strokes : 160.0

Tolerance

cm3/1000 strokes : \leftarrow 10.0

Check tolerance

cm3/1000s. : **←** 14.0

LOW IDLE

Rated speed rpm : 350

Rack travel in mm: 5.30 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes :

30.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s.: +- 6.0

teerq2 Tolerance

cm3/1000 strokes : 6.0

Check tolerance

cm3/1000s. : 10.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 26.09.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 676 825

Injection pump

Pump designation : PE6P12OA32ORS7430 EP type number : 0 412 626 960

Governor

Governer design. : RSV300...850P1A614 Governer no. : 0 421 833 502

Cust. part No. : 11031231 PO6 v.08/97

Customer-spec. information Customer : VCE

Motor : TD 103 KAE Power KW : 190.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity min. l/h : 300 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 103 assembly

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.25 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 11.00 Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

> : -300 : +- 0.50

Tolerance

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 500

t	
Rack travel in mm : 12.20 + Tolerance mm : + 0.05 +	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 306.0	Rated speed rpm : 500 Aneroid pressure
Tolerance cm3/1000 strokes : + 1.0	hPa : 1500 Del. quantity cm3/1000 strokes : 306.0
Check tolerance cm3/1000s. : +- 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000s. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 7.0	cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Check tolerance cm3/1000s. : 11.0	CIIS/ 10003. : 11.0
	CONTROL LEVER
Rated speed rpm : 325	control lever position degree : 52.0
Rack travel in mm : 4.20 + Tolerance mm : + 0.10 + Del. quantity +	tolerance degree : +- 4.0 control lever
cm3/1000 strokes : 34.0 + Tolerance +	position degree : 102.0 tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0 + Check tolerance cm3/1000s. : + 6.0 +	RATED SPEED rack travel mm : 10.80
Spreed + Tolerance + cm3/1000 strokes : 5.0 +	Rated speed rpm : 875 Tolerance 1/min : +- 5
Check tolerance cm3/1000s. : 8.0	rack travel mm : 4.00 Rated speed rpm : 950 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION FUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : + 0.55 Rated speed rpm : 1100
GUIDE SLEEVE POSITION	
control lever	LOW IDLE
position degree : -3 + Rated speed rpm : 800 +	control lever position degree : 76.0
Rack travel in mm : 0.50 Tolerance mm : + 0.20	tolerance degree : +- 4.0 control lever
governor spring + pre-tension + click setting x : 6.00 +	position degree : 26.0 tolerance degree : +- 4.0
	Setting point w/out bumper spring

Rated speed rom	: 325
rack travel mm	: 3.70
Tolerance mm	: ← 0.10
Testing:	
Rated speed rpm	: 325
rack travel mm	: 4.20
Tolerance mm	: ← 0.10
rack travel mm	: 2.00
Rated speed rpm	: 420
Tolerance 1/min	: ← 30
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 500 : 12.20 : ← 0.05
Rated speed rpm	: 700
rack travel mm	: 11.80
Tolerance mm	: + 0.10
Rated speed rpm rack travel mm Tolerance mm	: 12.00 : + 0.10
Rated speed rpm	: 500
rack travel mm	: 12.50
Tolerance mm	: + 0.10
ANEROID/ALTITUDE COMPENSATION TEST	
SETTING	
Rated speed rpm	: 500
Pressure hPa	: 1500
rack travel mm	: 12.20
Tolerance mm	: + 0.05
Rated speed rpm	: 500
Pressure hPa	: -
rack travel mm	: 9.35
Tolerance mm	: +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa	: 575
rack travel mm	: 2.35
Tolerance mm	: +- 0.20

Aneroid pressure hPa Rated speed rpm Del. quantity	: 1500 : 700
cm3/1000 strokes	: 264.0
Tolerance cm3/1000 strokes Check tolerance	: +- 1.0
cm3/1000s. Spreed	: +- 4.0
Tolerance	. 10.0
cm3/1000 strokes Check tolerance	: 10.0
cm3/1000s.	: 14.0
	
rack travel mm Tolerance mm	: 12.00 : + 0.10
Tolerance mm Aneroid pressure	
Aneroid pressure hPa Rated speed rpm	
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: +- 0.10 : -
Aneroid pressure hPa Rated speed rpm Del. quantity	: + 0.10 : - : 700
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: + 0.10 : - : 700 : 198.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: + 0.10 : - : 700 : 198.0 : + 1.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: + 0.10 : - : 700 : 198.0 : + 1.0

FUEL DELIVERY CHARACTERISTICS

LOW IDLE		
Rated speed rpm	:	325
Rack travel in mm Tolerance mm Del. quantity	: : +-	4.20 0.10
cm3/1000 strokes	:	34.0
cm3/1000 strokes	: +-	3.0
Check tolerance cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes	:	5.0
Check tolerance cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.09.97 Edition Test oil : ISO 4113

Combination No. : 0 402 575 827

Injection pump

Pump designation : PE6P110A320RS7408 EP type number : 0 412 616 800

Governor

Governer design. : RSV300...850P1A623 Governer no. : 0 421 833 530

Cust. part No. : 11030178 P04 v.08/97

Customer-spec. information Customer : VCE

Motor : TD 73 KHE Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : Tolerance bar : + 0.1

Overflow quantity

min. l/h : 210 Tolerance l/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

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Park Arrand in the CO	
Rack travel in mm: 9.90 Tolerance mm: +- 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 181.0	Rated speed rpm : 700 Aneroid pressure
Tolerance	hPa : 1500 Del. quantity cm3/1000 strokes : 181.0
Check tolerance	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s. : +- 4.0	Check tolerance cm3/1000S. : + 4.0
Spreed	Spreed Tolerance
Tolerance cm3/1000 strokes : 7.0	cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Check tolerance cm3/1000s. : 11.0	Cm3/10005. : 11.0
 ‡	CONTROL LEVER
Rated speed rpm : 300	control lever position degree : 52.0
Rack travel in mm: 3.50 + Tolerance mm: + 0.10 + Del. quantity	tolerance degree : +- 4.0 control lever
cm3/1000 strokes : 26.0 +	position degree : 104.0 tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0 + Check tolerance +	RATED SPEED
cm3/1000s. : + 6.0 + 5preed + Tolerance	rack travel mm : 8.90 Rated speed rpm : 895 Tolerance 1/min : +- 5
cm3/1000 strokes : 5.0 + Check tolerance	rack travel mm : 4.00
cm3/1000s. : 8.0	Rated speed rpm : 955 Tolerance 1/min : +- 10
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100
GUIDE SLEEVE POSITION	
control lever	LOW IDLE
position degree : -3 + Rated speed rpm : 800 +	control lever
Rack travel in mm: 0.50	position degree : 80.0
Tolerance mm : + 0.20	tolerance degree : +- 4.0 control lever
governor spring pre-tension	position degree : 30.0 tolerance degree : +- 4.0
click setting x : 6.00	Setting point w/out bumper spring

Rated speed rpm	: 300
rack travel mm	: 3.00
Tolerance mm	: + 0.10
Testing:	
Rated speed rpm	: 300
rack travel mm	: 3.50
Tolerance mm	: + 0.10
rack travel mm	: 2.00
Rated speed rpm	: 385
Tolerance 1/min	: ← 30
TORQUE CONTROL Rated speed rpm	: 700

TORQUE CONTROL	
Rated speed rpm	: 700
rack travel mm	: 9.90
Tolerance mm	: ⊢ 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm	:	500
Pressure hPa	:	1500
rack travel mm	:	9.90
Tolerance mm	: 1	- 0.05

Rated speed rpm	:	500
Pressure hPa	:	_
rack travel mm	:	5.80
Tolerance mm	: +	- 0.20

MEASUREMENT

Rated	speed	rpm	:	500

Pressure hPa	:	640
rack travel mm	:	2.70
Tolerance mm	: +	- 0.20

Pressure hPa	:	100
rack travel mm	:	0.25
Tolerance mm	: +	- 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure		-
hPa	:	_
Rated speed rpm	:	700
Del. quantity		
cm3/1000 strokes	:	115.0

Tolerance cm3/1000 strokes Check tolerance cm3/1000S.	: +-	1.0

	•	761	_
•	WO.	IDL	_
٠.	.08	TUL	_L

Rated speed rpm	:	300
Rack travel in mm Tolerance mm Del. quantity	: : +-	3.50 - 0.10
cm3/1000 strokes	:	26.0
cm3/1000 strokes Check tolerance	: +-	- 3.0
cm3/1000s. Spreed	: +-	- 6.0
Tolerance cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 25.09.97 Edition : ISO 4113 Test oil

Combination No. : 0 402 676 834

Injection pump

Pump designation : PE6P110A320RS7429 EP type number : 0 412 616 801

Governor

Governer design. : RSV300...850P1A623 Governer no. : 0 421 833 530

Cust. part No. : 11030715 P04 v.08.97

Customer-spec. information Customer : VCE

Motor : TO 73 KHE Power KW : 155.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 078

Inlet press. bar : 2.5 Tolerance bar : ← 0.1

Overflow quantity min. L/h : 210 Tolerance L/h : + 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 11.00 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Toierance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

J26

+	
Rack travel in mm: 13.20 Tolerance mm: + 0.05	FULL LOAD DELIVERY AT FULL LOAD STOP
Del. quantity cm3/1000 strokes : 181.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500
Tolerance cm3/1000 strokes : + 1.0	Del. quantity cm3/1000 strokes : 181.0
Check tolerance cm3/1000s. : + 4.0	Tolerance cm3/1000 strokes : +- 1.0 Check tolerance
Spreed	cm3/1000S. : +- 4.0 Spreed Tolerance
Tolerance cm3/1000 strokes : 7.0	cm3/1000 strokes : 7.0 Check tolerance cm3/1000s. : 11.0
Check tolerance cm3/1000s. : 11.0	CHS/10003 11.0
 ‡	CONTROL LEVER
Rated speed rpm : 300	control lever position degree : 47.0
Rack travel in mm : 5.40 Tolerance mm : + 0.10	tolerance degree : +- 4.0
Del. quantity cm3/1000 strokes : 26.0 Tolerance	control lever position degree : 97.0 tolerance degree : +- 4.0
cm3/1000 strokes : + 3.0 + Check tolerance	RATED SPEED
cm3/1000s. : + 6.0 + Spreed	rack travel mm : 12.20 Rated speed rpm : 895
Tolerance + cm3/1000 strokes : 5.0 + Check tolerance +	Tolerance 1/min : +- 5 rack travel mm : 4.00
cm3/1000s. : 8.0	Rated speed rpm : 960 Tolerance 1/min : +- 15
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	rack travel mm : 0.85 Tolerance mm : +- 0.55 Rated speed rpm : 1100
GUIDE SLEEVE POSITION	rack travel mm : 4.00 Rated speed rpm : 980 Tolerance 1/min : +- 15
control lever position degree : -3 Rated speed rpm : 800	
Rack travel in mm : 0.50 + Tolerance mm : +- 0.20 +	LOW IDLE
governor spring pre-tension	control lever position degree : 73.0 tolerance degree : +- 4.0
click setting x : 5.00	control lever position degree : 23.0

tolerance degree : + 4.0 Setting point w/out bumper spring 300 Rated speed rpm 4.90 rack travel mm : : +- 0.10 Tolerance mm Rated speed rpm : 100 CRT mm min. : > 9.40 Testing: Rated speed rpm : 300 rack travel mm : 5.40 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 455 Tolerance 1/min : +- 30 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.20
Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 13.20 Tolerance mm : + 0.05 Rated speed rpm : 500 Pressure hPa 9.80 rack travel mm : Tolerance mm : +- 0.20 MEASUREMENT Rated speed rpm : 500 Pressure hPa : rack travel mm : 700 3.20 : +- 0.20 Tolerance mm 100 Pressure hPa 0.25 rack travel mm : Tolerance mm : +- 0.05

Aneroid pressure			
hPa	:		_
Rated speed rom	:		700
Del. quantity			
cm3/1000 strokes	:		115.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance cm3/1000s.	:	+	.⊱ ŋ

LOW IDLE				
Rated speed rpm	:		300	
Rack travel in mm Tolerance mm Del. quantity	:	+-	5.40 0.10	
cm3/1000 strokes	:		26.0	
Tolerance cm3/1000 strokes	:	+-	3.0	•
Check tolerance cm3/1000s. Spreed	:	+-	6.0	
Tolerance cm3/1000 strokes	:		5.0	
Check tolerance cm3/1000s.	:		8.0	

End of test specification sheet

FUEL DELIVERY CHARACTERISTICS

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 29.09.97 : ISO 4113

Combination No. : 0 402 746 995

Injection pump

Pump designation : PES6P120A320RS7343

EP type number : 0 412 726 915

Governor

Governer design. : RQV300...1000PA1160K

Governer no. : 0 421 815 420

Cust. part No. : CCEP 5144A 66-232

Customer-spec. information

Customer : RENAULT V.I.

Motor

: MIDR 062356 A/41

Power KW

: 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 071

Inlet press. bar : 2.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.50 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 11.00

Toterance mm: \leftarrow 1.50

Firing order : 1-5-3-6-2-

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery mark

 $^{\circ}$ NW after s.o.d. : -0.40

Tolerance

: +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

Beginning of delivery differende

betw. rack trav.

21.00

and maximum rack

travel

11.00

Difference ° CS :

2.25

CRT ZERO POSITION

	Tolerance mm : + 0.25
Rack travel in mm : 12.80	+ Rated speed rpm : 823
Tolerance mm : +- 0.05	guide sleeve
	+ travel mm : 5.92
	+ Tolerance mm : + 0.25
BASIC SETTING	† .
Dated smood spec . 1000	Rated speed rpm : 405
Rated speed rpm : 1000	+ guide sleeve + travel mm : 2.43
Del. quantity	Tolerance mm : +- 0.25
cm3/1000 strokes : 350.0	+
	+ Rated speed rpm : 455
Tolerance	+ guide sleeve
cm $3/1000$ strokes : \leftarrow 1.0	travel mm : 2.98
Check tolerance	+ Tolerance mm : +- 0.25
cm3/1000s. : +- 4.0	Rated speed rpm : 550
1.0	guide sleeve
Spreed	+ travel mm : 3.66
	+ Tolerance mm : ← 0.25
Tolerance	†
cm3/1000 strokes : 5.0	+ Rated speed rpm : 1440
Charle telepope	guide sleeve
Check tolerance cm3/1000s. : 9.0	+ travel mm : 13.50 + Tolerance mm : + 0.50
CIII37 10003 9.0	Toterance min . 1- 0.50
·	+ GUIDE SLEEVE POSITION
Rated speed rpm : 300	+
Dock though in mm	†
Rack travel in mm: -7.70	t control lever
Tolerance mm : ← 0.10	position degree : - 1
Tolerance mm : + 0.10 Del. quantity	
Tolerance mm : + 0.10 Del. quantity	position degree : - 1
Tolerance mm : \(\opin 0.10\) Del. quantity cm3/1000 strokes : \(36.0\) Tolerance cm3/1000 strokes : \(\opin 1.0\)	position degree : - 1 - Rated speed rpm : 1300
Tolerance mm : \(\opin \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\opin \) 1.0 Check tolerance	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60
Tolerance mm : \(\opin \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\opin \) 1.0 Check tolerance cm3/1000s. : \(\opin \) 5.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30
Tolerance mm : \(\opin \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\opin \) 1.0 Check tolerance cm3/1000s. : \(\opin \) 5.0 Spreed	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60
Tolerance mm : \(\opin \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\opin \) 1.0 Check tolerance cm3/1000s. : \(\opin \) 5.0 Spreed Tolerance	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : \(\operatorname \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname \) 1.0 Check tolerance cm3/1000s. : \(\operatorname \) 5.0 Spreed Tolerance cm3/1000 strokes : 8.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000
Tolerance mm : \(\opin \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\opin \) 1.0 Check tolerance cm3/1000s. : \(\opin \) 5.0 Spreed Tolerance	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : \(\operatorname \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname \) 1.0 Check tolerance cm3/1000s. : \(\operatorname \) 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure
Tolerance mm : ← 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s. : ← 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0
Tolerance mm : \(\operatorname \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname \) 1.0 Check tolerance cm3/1000s. : \(\operatorname \) 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance
Tolerance mm : ← 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : ← 1.0 Check tolerance cm3/1000s. : ← 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0
Tolerance mm : \(\operatorname \) 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname \) 1.0 Check tolerance cm3/1000s. : \(\operatorname \) 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance mm : \(\operatorname = 0.10\) Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname = 1.0\) Check tolerance cm3/1000s. : \(\operatorname = 5.0\) Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1103	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1103 guide sleeve	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance mm : \(\operatorname = 0.10\) Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : \(\operatorname = 1.0\) Check tolerance cm3/1000s. : \(\operatorname = 5.0\) Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1103 guide sleeve travel mm : 8.70	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0
Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 36.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 5.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1103 guide sleeve	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance mm :	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance
Tolerance mm :	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : + 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0
Tolerance mm :	position degree : - 1 Rated speed rpm : 1300 Rack travel in mm : 11.60 Tolerance mm : +- 1.30 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 1000 Aneroid pressure hPa : 1200 Del. quantity cm3/1000 strokes : 350.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance

		†
control lever	. 117.0	ANEROID/ALTITUDE
position degree tolerance degree		+ COMPENSATOR TEST
totel and degree	4.0	- CONTRIVION (ES)
RATED SPEED		1
rack travel mm	: -1.00	+ SETTING
Rated speed rpm	: 1100	+
Tolerance 1/min	: +- 5	+ Rated speed rpm : 1000
		Pressure hPa : 1200
rack travel mm		+ 2
Rated speed rpm Tolerance 1/min		Rated speed rpm : 1000
rolerance i/min	: +- 15	+ Pressure hPa : - + rack travel mm : -3.90
rack travel mm	: -12.30	+ Tolerance mm : + 0.30
Tolerance mm		Poter all ite min
Rated speed rpm		↓ MEASUREMENT
The second of th		+
		Rated speed rpm : 1000
····		Pressure hPa : 320
LOW IDLE		+ rack travel mm : -2.80
. .		+ Tolerance mm : + 0.15
		}
control lever	.	Pressure hPa : 520
position degree		rack travel mm : -1.70
tolerance degree	: +- 4.0	+ Tolerance mm : +- 0.05
Testing:		İ
resting.		+ Start interlock
Rated speed rpm	: 300	- Start Michigan
rack travel mm		Rated speed rpm : > 100
Tolerance mm	: +- 0.10	+ Rated speed rpm : < 225
		+
Rated speed rpm	: 200	+ Check
COT		+ speed 1/min : > 80
CRT mm max.	: < -6.70	+ Check + speed 1/min : < 245
Rated speed rpm	: 390	T speed 1/11/11 . \ 243
nated speed Ipin	. 376	
		- + FUEL DELIVERY CHARACTERISTICS
TORQUE CONTROL		+
Rated speed rpm	: 1000	†
Dukasi ana di ci		+ Aneroid pressure
Rated speed rpm rack travel mm Tolerance mm	: OUU	+ hPa : 1200
Tolerance mm	· -0.45 · +- በ 15	+ Rated speed rpm : 600 + Del. quantity
TOTEL ALICE IMIL		+ cm3/1000 strokes : 381.0
Rated speed rpm	: 800	Tolerance
rack travel mm	: 0.10	+ cm3/1000 strokes : +- 3.0
rack travel mm Tolerance mm	: +- 0.15	+ Check tolerance
		+ cm3/1000s. : +- 6.0
Rated speed rpm	: 350	†
Rated speed rpm rack travel mm Tolerance mm	: -1./0	Tools thought and the Control
iolerance mm	; +- u.su	+ rack travel mm : 0.10 + Tolerance mm : + 0.15
		Totalice iiiii . = 0.()
		Aneroid pressure
		→ hPa : -

500 Rated speed rpm : Del. quantity cm3/1000 strokes : 245.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 : 20.25 rack travel mm Tolerance mm : **←** 0.75 Del. quantity

cm3/1000 strokes : 185.0

Tolerance

cm3/1000 strokes : +- 15.0

Check tolerance

cm3/1000s. : +- 19.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : -7.70 Tolerance mm : +- 0.10

Del. quantity

cm3/1000 strokes : 36.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

5.0 cm3/1000s.

Spreed

Tolerance

cm3/1000 strokes : 3.0

Check tolerance

12.0 cm3/1000S.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.07.98 : ISO 4113

Combination No. : E 040 101 200

Injection pump

Pump designation : PES6A100D320/3RS3506

EP type number : 9 410 037 236

Governor

Governer design. : RQV400...1250AB1328R

Governer no. : 0 042 096 600

Cust. part No. : TATA-CUMMINS

Customer-spec. information

Customer : CUMMINS Motor

: 6BT - 125 ps

TEST BENCH REQUIREMENTS

Inlet line : 1.1;

Test oil inlet

temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 9 451 037 430

Inlet press. bar : 2.0

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0

Tolerance bar : +- 1.0

Prestroke mm : 3.60 Tolerance mm : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery blocking

*NW after s.o.d. : 5.75 Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 10.00

Tolerance mm : +- 0.05

Rack travel in mm : 6.40 Tolerance mm : + 0.10

(B) SETTING OF INJECTION PUMP WITH GOVERNOR

RATED SPEED

rack travel mm : 9.30 Rated speed rpm : 1300 9.30 Tolerance 1/min : +- 5

rack travel imm : 0.50
Tolerance mm : + 0.50 Rated speed rpm : 1490

LOW IDLE

Testing:

Rated speed rpm : 400 rack travel mm : 6.40 Tolerance mm : + 0.10

TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 10.00 Tolerance mm : + 0.05

Rated speed rpm : 550 rack travel mm : 10.30 rack travel mm Tolerance mm : + 0.10

Rated speed rpm : 750 rack travel mm : 10.30 Tolerance mm : \leftarrow 0.15

Start interlock

Rated speed rpm : > Rated speed rpm : > 170 300

Check

speed 1/min : < 190 Check

speed 1/min : < 340

FUEL DELIVERY CHARACTERISTICS

rack travel mm : 10.30 Tolerance mm : + 0.15

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 14.40 Tolerance mm : $\leftarrow 0.50$

LOW IDLE

Rack travel in mm: 6.40 Tolerance mm : \leftarrow 0.10

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 21.07.98

Test oil

: ISO 4113

Combination No. : F 002 A0Z 109

Injection pump

Pump designation : PES6A95D12ORS2916 EP type number : F 002 A10 010

Governor

Governer design. : RSV425...1050A0c982R

Governer no. : F 002 A20 257

Cust. part No. : 328 4544

Customer-spec. information

Customer : CUMMINS

Motor

: 6BT

Power KW

: 105.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

Tolerance °C

: + 2.0

Overflow valve : 2 417 413 093

Inlet press. bar : 2.0 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

: 208.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

K07

x inside diameter : 2.0 x Length mm :

600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in min: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.50

Tolerance Check

: +- 0.10

tolerance °NW : + 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1050

Rack travel in mm : 11.05

Tolerance mm : +- 0.05

1	Aneroid pressure
Del. quantity	hPa : 900
cm3/1000 strokes : 94.3	Del. quantity
<u> </u>	cm3/1000 strokes : 94.3
Tolerance	Tolerance
cm3/1000 strokes : +- 1.0 +	cm3/1000 strokes : +- 1.0
Check tolerance	Check tolerance cm3/1000s. : +- 3.0
cm3/1000s. : + 3.0	Spreed
	Tolerance
Spreed	cm3/1000 strokes : 4.0
T-1	Check tolerance
Tolerance + cm3/1000 strokes : 4.0 +	cm3/1000s. : 6.0
CIIDA 1000 SELOKES : 4.0	
Check tolerance	
cm3/1000s. : 6.0	CCNTROL LEVER
	aamamad dawaa
I	control lever position degree : 95.0
Rated speed rpm : 425	tolerance degree : +- 4.0
+	
Rack travel in mm: 5.05	RATED SPEED
Toterance mm : + 0.10	rack travel mm : 10.05
Del. quantity + cm3/1000 strokes : 18.5 +	Rated speed rpm : 1120
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	rack travel mm : 4.50
Check tolerance	Rated speed rpm : 1175
cm3/1000s. : + 4.5	Tolerance 1/min : +- 5
Spreed +	
Tolerance + cm3/1000 strokes : 6.0 +	rack travel mm : 0.85
cm3/1000 strokes : 6.0 + Check tolerance	Tolerance mm : +- 0.55 Rated speed rpm : 1300
cm3/1000s. : 8.0	Rateu speed (piii . 1500
-	rack travel mm : 4.50
+	Rated speed rpm : 1175
(B) SETTING OF INJECTION PUMP	Tolerance 1/min : +- 15
WITH GOVERNOR	
I	
GUIDE SLEEVE POSITION	LOW IDLE
†	
control lever	control lever
position degree : FREE	position degree : 76.0
Rated speed rpm : 800	tolerance degree : +- 4.0
· · · · · · · · · · · · · · · · · · ·	
Rack travel in mm: 0.50	Control lever difference
Tolerance mm : ← 0.20	Grad : 19.0
governor spring +	tolerance degree : +- 6.0
pre-tension +	Setting point w/out bumper spring
click setting x : 2.25	cotting point would bumper spiritig
+	Rated speed rpm : 425
+	rack travel mm : 4.05
FULL LOAD DELIVERY AT FULL LOAD STOP	Tolerance mm : +- 0.10
Rated speed rpm : 1050	Rated speed rpm : 100
Т Т	nacea speed (piii . 100

K08

CRT mm min. :> 19.00Testing: 425 Rated speed rpm rack travel mm 5.05 : +- 0.10 Tolerance mm rack travel mm 2.00 Rated speed rpm : 560 Tolerance 1/min : +- 30 TORQUE CONTROL 1050 Rated speed rpm : rack travel mm : 11.05 Tolerance mm : +- 0.05 800 Rated speed rpm : rack travel mm : 11.70 Tolerance mm : +- 0.20 ANEROID/ALTITUDE COMPENSATOR TEST **SETTING** Rated speed rpm 500 Pressure hPa 900 **50**0 Rated speed rpm : Pressure hPa rack travel mm : 10.30 Tolerance mm : +- 0.20 **MEASUREMENT** Rated speed rpm : 500 650 Pressure hPa 11.40 rack travel mm : +- 0.20 Tolerance mm Pressure hPa : 400 rack travel mm 10.60 Tolerance mm : +- 0.20 FUEL DELIVERY CHARACTERISTICS Aneroid pressure 900

Tolerance cm3/1000 strokes : +- 2.0 Check tolerance : +cm3/1000s. 4.0 Aneroid pressure hPa Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 85.1 Tolerance cm3/1000 strokes : +-1.0 Check tolerance cm3/1000s. 3.0 : +-STARTING FUEL DELIVERY Rated speed rpm 100 rack travel mm : 20.50 . ← 0.50 Tolerance mm Del. quantity cm3/1000 strokes : 121.5 Tolerance cm3/1000 strokes : +- 10.0Check tolerance : +- 15.0 cm3/1000s. LOW TOLE Rated speed rpm : 425 Rack travel in mm : 5.05 Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 18.5 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 4.5 Spreed Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. 8.0

End of test specification sheet

Rated speed rpm :

cm3/1000 strokes :

Del. quantity

800

105.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil : 16.07.98 : ISO 4113

Combination No. : 0 402 040 700

Injection pump

Pump designation : PES12P120A920RS3335

EP type number : 0 412 020 701

Governor

Governer design. : RQV350...1400PA1145

Governer no. : 0 421 814 092

Cust. part No. :

Customer-spec. information

Customer : FINCANTIERI

Motor

: 1312 T2

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Test oil inlet

temp. °C

Tolerance *C

: +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar

208.5

Tolerance bar

: **←** 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

K10

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar :

Tolerance bar : +- 1.0

Prestroke mm : 3.55 Tolerance mm : +- 0.05

Check

tolerance mm : ← 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-12-9-4-5

: - 8-11- 2- 3

: - 10- 7- 6

Phasing : 0-45-60-105-120

: -165--180--225-240

: -285-300-345 : +- 0.50

Tolerance Check

tolerance °NW : +- 0.75

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 15.30

Tolerance mm : + 0.05

Del. quantity

cm3/1000 strokes : 288.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance

cm3/1000s.

: +- 4.0

Spreed

Tolerance	†
cm3/1000 strokes : 7.0	+ Rated speed rpm : 1740
	+ guide sleeve
Check tolerance	+ travel mm : 11.50
cm3/1000s. : 11.0	+ Tolerance mm : +- 0.50
	_ +
	+ GUIDE SLEEVE POSITION
Rated speed rpm : 350	†
D 40	†
Rack travel in mm: 8.10	+ control lever
Tolerance mm : +- 0.10	position degree : - 1
Del. quantity	+ Rated speed rpm : 1490
cm3/1000 strokes : 39.0	† 5 1 20
Tolerance	Rack travel in mm : 14.30
cm3/1000 strokes : +- 3.0	+ Tolerance mm : +- 1.30
Check tolerance	†
cm3/1000s. : +- 6.0	†
Spreed Tolerance	CONTROL LEVED
cm3/1000 strokes : 10.0	+ CONTROL LEVER
Check tolerance	T control lever
cm3/10COS. : 14.0	position degree : 117.0
CIII3/ 10003: 141.0	tolerance degree : +- 4.0
	toter ance degree 4.0
(B) SETTING OF INJECTION PUMP	ARATED SPEED
WITH GOVERNOR	+ rack travel mm : 14.30
	Rated speed rpm : 1395
	- + Tolerance 1/min : +- 5
GUIDE SLEEVE TRAVEL	+
	+ rack travel mm : 4.00
Rated speed rpm : 1415	+ Rated speed rpm : 1630
guide sleeve	→ Tolerance 1/min : + 15
travel mm : 8.40	+
Tolerance mm : +- 0.15	+ rack travel mm : 1.00
	+ Tolerance mm : + 0.70
Rated speed rpm : 350	+ Rated speed rpm : 1750
guide sleeve	†
travel mm : 1.63	†
Tolerance mm : +- 0.20	†
Rated speed rpm : 910	LOUTNE
Rated speed rpm : 910 guide sleeve	+ LOW IDLE
travel mm : 5.33	1
Tolerance mm : +- 0.25	control lever
The second of th	position degree : 73.0
Rated speed rpm : 394	tolerance degree : + 4.0
guide sleeve	+
travel mm : 2.38	Setting point w/out bumper spring
Tolerance mm : +- 0.25	+
	Rated speed rpm : 250
Rated speed rpm : 444	+
Rated speed rpm : 444 guide sleeve	Rated speed rpm : 250 CRT mm min. :> 9.60
Rated speed rpm : 444 guide sleeve travel mm : 2.95	CRT mm min. : > 9.60
Rated speed rpm : 444 guide sleeve	+
Rated speed rpm : 444 guide sleeve travel mm : 2.95 Tolerance mm : +- 0.25	CRT mm min. : > 9.60 Testing:
Rated speed rpm : 444 guide sleeve travel mm : 2.95 Tolerance mm : +- 0.25 Rated speed rpm : 520	CRT mm min. : > 9.60 Testing: Rated speed rpm : 350
Rated speed rpm : 444 guide sleeve travel mm : 2.95 Tolerance mm : +- 0.25 Rated speed rpm : 520 guide sleeve	CRT mm min. : > 9.60 Testing: Rated speed rpm : 350
Rated speed rpm : 444 guide sleeve travel mm : 2.95 Tolerance mm : +- 0.25 Rated speed rpm : 520	CRT mm min. : > 9.60 Testing: Rated speed rpm : 350

Rated speed rpm : 525 TORQUE CONTROL 750 Rated speed rom rack travel mm 15.30 : **←** 0.05 Tolerance mm : 1350 Rated speed rpm rack travel mm : 15.30 : +- 0.15 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm 500 Pressure hPa 1000 : 15.35 : +- 0.05 rack travel mm Tolerance min Rated speed rpm 500 : Pressure hPa rack travel mm 10.80 Tolerance mm : + 0.20**MEASUREMENT** Rated speed rpm 500 400 Pressure hPa rack travel mm 12.00 : **←** 0.20 Tolerance mm Pressure hPa 500 13.75 rack travel mm : : +- 0.05 Tolerance mm FUEL DELIVERY CHARACTERISTICS Aneroid pressure hPa 1000 Rated speed rpm 1350 Del. quantity cm3/1000 strokes : 278.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0

Del. quantity cm3/1000 strokes : 139.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

ESS test: With 24 V solenoid activated, rack must reach start position in max. control lever setting.

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75 Del. quantity cm3/1000 strokes : 420.0 Tolerance cm3/1G00 strokes : + 15.0 Check tolerance cm3/1000s. : + 19.0

LOW IDLE

Rated speed rpm : 350 Rack travel in mm : 8.10 Tolerance mm : \leftarrow 0.10 Del. quantity cm3/1000 strokes : 39.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. : +-6.0 Spreed Tolerance cm3/1000 strokes : 10.0 Check tolerance cm3/1000s. : 14.0

End of test specification sheet

Aneroid pressure

Rated speed rpm :

500

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 046 883

Injection pump

Pump designation : PES6P120A1320/5LS339

: 9

EP type number : 0 412 026 808

Governor

Governer design. : RQ750PA1387 Governer no. : 0 421 801 834

Cust. part No. : 1409259

Customer—spec. information Customer : SCANIA Motor : DSC12 40A

TEST BENCH REQUIREMENTS

Test oil inlet

temp. °C : 40Tolerance °C : \leftarrow 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Tolerance l/h: +- 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05
Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50Tolerance mm : +-0.50

Firing order : 1-4-2-6-3-

: 5

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : \leftarrow 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 6

BASIC SETTING

Rated speed rpm : 700

Tolerance mm : +- 0.05

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance cm3/1000s. : +- 8.0

Spreed	rack travel mm : 4.00 Rated speed rpm : 775 Tolerance 1/min : +- 15
Tolerance cm3/1000 strokes : 8.0	Check speed 1/min : + 20
Check tolerance cm3/1000s. : 12.0	Tolerance mm : +- 0.50 Rated speed rpm : 850
Tolerance mm : - 0.10	LOW IDLE
cm3/1000 strokes : +- 3.0 Check tolerance	Setting point w/out bumper spring
cm3/1000s. : + 6.0 -	
Tolerance cm3/1000 strokes : 4.0	CRT mm min. : > 1.50
Check tolerance cm3/1000s. : 8.0	Testing:
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 250 Tolerance mm : + 0.10
WITH GOVERNOR	Rated speed rpm : 300
FILL LOAD DELTIFON AT FILL LOAD DEED	TORQUE CONTROL
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 700 Tolerance mm : +- 0.05
Aneroid pressure hPa : 1500 + Tolerance	Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0 Check tolerance	ANEROID/ALTITUDE
cm3/1000s. : +- 8.0 +- Spreed	COMPENSATOR TEST
Tolerance cm3/1000 strckes : 8.0	SETTING
Check tolerance cm3/1000s. : 12.0	Rated speed rpm : 500 Pressure hPa : 1500 Tolerance mm : +- 0.05
CONTROL LEVER	Rated speed rpm : 500 Pressure hPa : -
control lever position degree : 26.0	Tolerance mm : +- 0.20
tolerance degree : + 4.0	MEASUREMENT
control lever position degree : 88.0	Rated speed rpm : 500
tolerance degree : +- 4.0	Pressure hPa : 350 Tolerance mm : + 0.15
RATED SPEED Rated speed rpm : 750 Tolerance 1/min : + 5 Check	Pressure hPa : 750 Tolerance mm : + 0.05
speed 1/min : +- 10	

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : + 8.0

LOW IDLE

Tolerance mm : + 0.10
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 4.0
Check tolerance
cm3/1000s. : 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 22.07.98 Edition : ISO 4113 Test oil

Combination No. : 0 402 076 822

Injection pump

Pump designation : PES6P110A320RS3400 EP type number : 0 412 016 759

Governor

Governer design. : RSV300...1000P1A695

Governer no. : 0 421 833 618

Cust. part No. : 11032943 v. 25.02.98

Customer-spec. information Customer

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 2 417 413 077

Inlet press. bar : 2.5

Overflow quantity

min. l/h : 150 Tolerance l/h : ← 20.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : +- 1.0

Prestroke mm : 2.45 Tolerance mm : ← 0.05 Check tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm: 13.30 Tolerance mm : +- 0.05

Del. quantity cm3/1000 strokes : 131.0	Del. quantity - cm3/1000 strokes : 131.0 - Tolerance
Tolerance - cm3/1000 strokes : + 1.0	- cm3/1000 strokes : +- 1.0 - Check tolerance
Check tolerance	- cm3/1000s. : +- 4.0 - Spreed
cm3/1000S. : +- 4.0	Tolerance - cm3/1000 strokes : 5.0 - Check tolerance
	- cm3/1000s. : 9.0
Tolerance cm3/1000 strokes : 5.0	L L
Check tolerance - cm3/1000S. : 9.0 -	CONTROL LEVER
	- control lever - position degree : 106.0 - tolerance degree : +- 4.0
Rated speed rpm : 300	
Danie Angual in any a 0.00	- RATED SPEED
Rack travel in mm : 9.00 - Tolerance mm : + 0.10 -	- rack travel mm : 12.30 - Rated speed rpm : 1022
Del. quantity -	Tolerance 1/min : + 5
cm3/1000 strokes : 49.0	
Tolerance - cm3/1000 strokes : +- 2.0 -	- rack travel mm : 4.00 - Rated speed rpm : 1075
Check tolerance	- Tolerance 1/min : +- 10
cm3/1000s. : + 5.0 -	
Spreed - Tolerance -	- rack travel mm : 0.85 - Tolerance mm : +- 0.55
cm3/1000 strokes : 7.0	- Rated speed rpm : 1150
Check tolerance	•
cm3/1000s. : 11.0 -	· · · · · · · · · · · · · · · · · · ·
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	- LOW IDLE
+	- control lever
CUITAT CUITATE PARTITION	position degree : 77.0
GUIDE SLEEVE POSITION	- tolerance degree : +- 4.0
-	- Testing:
control lever	Poted speed speed - 700
position degree : - 3 Rated speed rpm : 800	- Rated speed rpm : 300 - rack travel mm : 9.00
(1404 opeca (p.m.)	- rack travel mm : 9.00 - Tolerance mm : + 0.10
Rack travel in mm: 0.50	- - rack travel mm : 2.00
governor spring	- Rated speed rpm : 370 - Tolerance 1/min : +- 30
pre-tension click setting x : 4.25	- Tolerance 1/min : +- 30 -
Taran Taran Maria	- SET IDLE AUXILIARY SPRING
FULL LOAD DELIVERY AT FULL LOAD STOP	- nack travel mm · 200
TOLL LOAD MELIVERY AT FULL LUAD STUP	- rack travel mm : 2.00 - Tolerance mm : +- 2.00
Rated speed rpm : 700	-
Aneroid pressure -	TORQUE CONTROL
nun ' - 1	

Rated speed rpm : 700 rack travel mm : 13.30 Tolerance mm : + 0.05

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 700 Pressure hPa : 1500 rack travel mm : 13.30 Tolerance mm : + 0.05

Rated speed rpm : 700
Pressure hPa : rack travel mm : 10.90
Tolerance mm : +- 0.10

MEASUREMENT

Rated speed rpm : 700

Pressure hPa : 660 rack travel mm : 2.00 Tolerance mm : +- 0.20

Pressure hPa : 130 rack travel mm : 0.25 Tolerance mm : ← 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : -Rated speed rpm : 700

Del. quantity cm3/1000 strokes : 85.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

LOW IDLE

Rated speed rpm : 300

Rack travel in mm : 9.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 49.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

cm3/1000s. : \leftarrow 5.0

Spreed Tolerance

cm3/1000 strokes : 7.0

Check tolerance

cm3/1000s. : 11.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 21.07.98 : ISO 4113

Combination No. : 0 402 630 814

Injection pump

Pump designation : PE12P130A120LS7338 EP type number : 0 412 630 805

Governor

Governer design. : RQV300...825PA1152

Governer no. : 0 421 814 095

Cust. part No. : 4.030.377.3

Customer—spec. information Custcmer : SACM : U025.V12 Motor

Power KW

: 1050.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1; 3.2

Test oil inlet

temp. °C Tolerance *C : + 2.5

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Test nozzle holde

: 0 681 443 022 assembly

Opening pressure

: 173.5 bar Tolerance bar : + 1.5

Test Lines : 1 680 750 060

Outside diameter : 8.0

x inside diameter : 4.0 x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.85
Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm : 10.50 Tolerance mm : +- 1.50

Firing order : 1- 8-5- 10- 3

: - 7- 6- 11 : - 2- 9- 4

: - 12

Phasing : 0-37.5-60-97.5-120

: -157.5-180-217.5 : -240-277.5-300

: -337.5

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

: +- 0.50 Tolerance

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 825

	1
Rack travel in mm : 12.00 Tolerance mm : +- 0.05	Rated speed rpm : 389 guide sleeve travel mm : 3.29
Del. quantity cm3/1000 strokes : 450.5	Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.5	Rated speed rpm : 620 guide sleeve travel mm : 4.83 Tolerance mm : + 0.25
Check tolerance : +- 5.0	Rated speed rpm : 1130
Spreed	
Tolerance cm3/1909 strokes : 6.0	GUIDE SLEEVE POSITION
Check tolerance cm3/1000S. : 10.0	GOIDE SLEEVE FOSTITORY
	+ control lever + position degree : - 1 + Reted speed rpm : 980
Rated speed rpm : 300	Rack travel in mm: 10.00
Rack travel in mm : 5.00 Tolerance mm : +- 0.10 Del. quantity	Tolerance mm : +- 2.00
cm3/1000 strokes : 60.0 Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : +- 3.0	Rated speed rpm : 825
Check tolerance cm3/1000S. : +- 7.0 Spreed	+ Aneroid pressure + hPa : - Del. quantity
Tolerance cm3/1000 strokes : 10.0	cm3/1000 strokes : 450.5
Check tolerance cm3/1000s. : 14.0	cm3/1000 strokes : +- 1.5 Check tolerance
, 14.0	cm3/1000s. : + 5.0 + Spreed
(B) SETTI⊗ OF INJECTION PUMP WITH GOVERNOR	Tolerance cm3/1000 strokes : 6.0
GUIDE SLEEVE TRAVEL	‡
Rated speed rpm : 890 guide sleeve	CONTROL LEVER
travel mm : 7.85 Tolerance mm : +- 0.25	t control lever
Rated speed rpm : 300	position degree : 120.0 tolerance degree : +- 4.0
guide sleeve	†
travel mm : 1.84 Tolerance mm : + 0.25	+ RATED SPEED + rack travel mm : 11.00
Rated speed rpm : 339	+ Rated speed rpm : 875 + Tolerance 1/min : +- 5
guide sleeve travel mm : 2.61	I mark through mm
Tolerance mm : + 0.25	+ rack travel mm : 4.00 + Rated speed rpm : 950

Tolerance 1/min : +- 15

rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1060

LOW IDLE

control lever

position degree : 70.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 200

CRT mm min. : > 7.70

Testing:

Rated speed rpm : 300 rack travel mm : 5.00 Tolerance mm : +- 0.10

Rated speed rpm : 400

TORQUE CONTROL

Rated speed rpm : 825 rack travel mm : 12.00 Tolerance mm : + 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : > 220

Check

speed 1/min : > 80

Check

speed 1/min : > 240

LOW IDLE

Rated speed rpm : 300

Rack travel in mm: 5.00 Tolerance mm: + 0.10

K21

Del. quantity

cm3/1000 strokes : 60.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : \leftarrow 7.0

Spreed

Tolerance

cm3/1000 strokes : 10.0

Check tolerance

cm3/1000s. : 14.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Test oil

: 20.07.98 : ISO 4113

combination No. : 0 402 646 664

Injection pump

Pump designation : PE6P12OA320LS7401 EP type number : 0 412 626 950

Governor

Governer design. : RQV325...1000PA1256K

Governer no. : 0 421 815 493

Cust. part No. :

Customer-spec. information Customer : LIAZ : ML636E Motor Power KW : 175.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

remp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : Tolerance bar : + 0.1

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter : 3.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : \leftarrow 1.0

Prestroke mm : 5.80 Tolerance min : +- 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 12.00 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-130-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : **←** 0.75

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm : 13.80 Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 215.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 4.0

Spreed

K22

Check tolerance m3/1000s. 9.0 Rated speed rpm 1140	
Rated speed rpm : 325 Rack travel in mm : 4.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000 strokes : 4.0 Tolerance im : 1057 guide sleeve travel mm : 9.78 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.47 Tolerance mm : 12.80 Rated speed rpm : 1045 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance mm : 4.00 Tolerance mm : + 0.25 Tolerance mm : 4.00 Rated speed rpm : 1145	
Rack travel in mm : 4.40 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 38.0	
Tolerance mm : + 0.10 Del. quantity Cm3/1000 strokes : 38.0 Tolerance Cm3/1000 strokes : + 3.0 Check tolerance Cm3/1000s. : + 6.0 Spreed Tolerance Cm3/1000s. : + 6.0 Check tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Check tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : + 4.0 Spreed Tolerance Cm3/1000s. : + 4.0 Check tolerance Cm3/1000s. : - 10 Check tolerance Cm3/1000s. : - 10 Check tolerance Cm3/1000s. :	.OP
Del. quantity cm3/1000 strokes : 38.0 Tolerance cm3/1000 strokes : + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000s. : + 4.0 cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Check tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Spreed Tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : 9.0 Check tolerance cm3/1000s. : 9.0 CONTROL LEVER CONTROL LEVER CONTROL LEVER CONTROL LEVER Control lever position degree : + 4.0 tolerance degree : + 4.0 Tolerance mm : + 0.15 Control lever position degree : 119.0 tolerance degree : + 4.0 RATED SPEED Tolerance degree : + 4.0 RATED SPEED Tolerance mm : + 0.20 Rated speed rpm : 1045 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance 1/min : + 5 Tolerance mm : 4.00 Tolerance mm : + 0.25 Rated speed rpm : 1145	
cm3/1000 strokes : 38.0 hPa : 1500 Tolerance cm3/1000 strokes : + 3.0 cm3/1000 strokes : 215.0 Check tolerance cm3/1000s. : + 6.0 cm3/1000 strokes : + 1.0 Spreed Tolerance cm3/1000 strokes : 8.0 Spreed Tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000s. : 12.0 cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 12.0 cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. : 9.0 cm3/1000s. : 9.0 CB) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER GUIDE SLEEVE TRAVEL control lever position degree : 65.0 tolerance degree : + 4.0 Rated speed rpm : 9.78 Tolerance mm : + 0.15 control lever position degree : 119.0 tolerance degree : + 4.0 Rated speed rpm : 325 tolerance degree : + 4.0 RATED SPEED rack travel mm : 12.80 Rated speed rpm : 1045 Rated speed rpm : 831 tolerance 1/min : + 5 Tolerance 1/min : + 5 Rated speed rpm : 6.95 tolerance mm : + 0.25 rack travel mm : 4.00 Tolerance mm : + 0.25 Rated speed rpm : 1145	
cm3/1000 strokes : + 3.0 cm3/1000 strokes : 215.0 Check tolerance cm3/1000 strokes : + 1.0 cm3/1000s. : + 6.0 cm3/1000 strokes : + 1.0 Spreed cm3/1000s. : + 4.0 Tolerance cm3/1000s. : + 4.0 Check tolerance cm3/1000 strokes : 5.0 Control lever control lever position degree : 4.0 tolerance degree : 4.0 Rated speed rpm : 1045 rack travel mm : 1045	
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Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1057 guide sleeve travel mm : 9.78 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 331 guide sleeve travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 331 guide sleeve travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 331 guide sleeve travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 1045 Tolerance 1/min : + 5 guide sleeve travel mm : 6.95 Tolerance mm : 4.00 Tolerance mm : + 0.25 Rated speed rpm : 1145	
Tolerance	
Cm3/1000s. : 12.0	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONTROL CEVEN CONTRO	
(B) SETTING OF INJECTION PUMP WITH GOVERNOR CONTROL LEVER CONTRO	
GUIDE SLEEVE TRAVEL Rated speed rpm : 1057	
Rated speed rpm : 1057 guide sleeve	
guide sleeve + 0.78 travel mm : 9.78 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve + 0.20 travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 1045 Rated speed rpm : 831 guide sleeve + 70 travel mm : 6.95 Tolerance mm : 4.00 Tolerance mm : 4.00 Rated speed rpm : 1145	
travel mm : 9.78 Tolerance mm : + 0.15 Rated speed rpm : 325 guide sleeve travel mm : 1.47 Tolerance mm : + 0.20 Rated speed rpm : 831 Rated speed rpm : 831 guide sleeve travel mm : 6.95 Tolerance mm : + 0.25 Rated speed rpm : 145	
Rated speed rpm : 325	
Rated speed rpm : 325	
Travel mm : 1.47 + RATED SPEED Tolerance mm : + 0.20 + rack travel mm : 12.80 Rated speed rpm : 1045 Rated speed rpm : 1045 Tolerance 1/min : + 5 guide sleeve + rack travel mm : 4.00 Tolerance mm : + 0.25 + Rated speed rpm : 1145	
Tolerance mm : + 0.20	
Rated speed rpm : 831	
travel mm : 6.95 + rack travel mm : 4.00 Tolerance mm : +- 0.25 + Rated speed rpm : 1145	
Tolerance mm : +- 0.25 + Rated speed rpm : 1145	
Rated speed rpm : 550	
guide sleeve + rack travel mm : 0.50 travel mm : 3.76 + Tolerance mm : +- 0.50	
7.1	
+	
Rated speed rpm : 1290 + guide sleeve +	
travel mm : 13.50 +	
Tolerance mm : + 0.50 + LOW IDLE	
GUIDE SLEEVE POSITION Control lever	
+ position degree : 69.0	
+ tolerance degree : +- 4.0	

control lever

position degree : 15.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 225

CRT mm min. : > 6.00

Testing:

Rated speed rpm : 325 rack travel mm : 4.40 Tolerance mm : + 0.10

Rated speed rpm : 350

TORQUE CONTROL

Rated speed rpm : 1000 rack travel mm : 13.80 Tolerance mm : +- 0.05

Rated speed rpm : 700 rack travel mm : 13.45 Tülerance mm : + 0.20

Rated speed rpm : 600 rack travel mm : 12.85 Tolerance mm : + 0.20

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 1000
Pressure hPa : 1500
rack travel mm : 13.80
Tolerance mm : + 0.05

Rated speed rpm : 1000
Pressure hPa : rack travel mm : 11.15
Tolerance mm : + 0.10

MEASUREMENT

Rated speed rpm : 1000

Pressure hPa : 260 rack travel mm : 11.70 Tolerance mm : + 0.20

Pressure hPa : 370 rack travel mm : 13.20

Tolerance mm : \leftarrow 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 255

Check

speed 1/min : > 80 Check

speed 1/min : < 265

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 700 Del. quantity

cm3/1000 strokes : 230.0

Tolerance

cm3/1000 strokes : +- 3.0

Check tolerance

cm3/1000s. : +- 6.0

rack travel mm : 12.85 Tolerance mm : + 0.20

Aneroid pressure

hPa : -Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 191.0

Tolerance

cm3/1000 strokes : + 2.0 Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100

Del. quantity

cm3/1000 strokes : 300.0

Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 325

K24

Rack travel in mm Tolerance mm	:	+-	4.40 0.10
Del. quantity cm3/1000 strokes Tolerance	:		38.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s.	:	+-	6.0
Spreed Tolerance			
cm3/1000 strokes	:		8.0
Check tolerance cm3/1000s.	:		12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 22.07.98 Test oil : ISO 4113

Combination No. : 0 402 646 667

Injection pump

Pump designation : PE6P120A320RS7412 EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278K

Governer no. : 0 421 815 509

Cust. part No. : 1310221/1

Customer-spec. information Customer : DAF

Motor : XF 315 M Power KW : 315.0

TEST BENCH REGUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Overflow quantity
min. l/h : 140
Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : + 1.0

Prestroke mm : 4.45
Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance "NW : +- 0.75

Start of delivery mark

Tolerance

: + 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 980

Rack travel in mm: 13.40

Tolerance mm : \leftarrow 0.05

	+ guide sleeve
Del. quantity cm3/1000 strokes : 318.0	travel mm : 3.92 Tolerance mm : +- 0.25
Tolerance cm3/1000 strokes : + 1.0	Rated speed rpm : 1310 quide sleeve
cm3/1000 strokes : — 1.0	travel mm : 13.50
Check tolerance cm3/1000s. : + 4.0	+ Tolerance mm : +- 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 5.0	control lever
Check tolerance cm3/10COS. : 9.0	position degree : - 1 Rated speed rpm : 1158
	Rack travel in mm : 12.00
	+ Tolerance mm : + 2.70
Rated speed rpm : 275	
Rack travel in mm : 5.30	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance mm : +- 0.10	Rated speed rpm : 980
Del. quantity cm3/1000 strokes : 13.5	+ Aneroid pressure + hPa : 1500
Tolerance	Del. quantity
cm3/1000 strokes : +- 3.0 Check tolerance	- cm3/1000 strokes : 318.0 - Tolerance
cm3/1000s. : + 6.0	+ cm3/1000 strokes : +- 1.0
Spreed	Check tolerance
Tolerance cm3/1000 strokes : 8.0	+ cm3/1000s. : + 4.0 + Spreed
Check tolerance	+ Tolerance
cm3/1000s. : 12.0	+ cm3/1000 strokes : 5.0 + Check tolerance
(B) SETTING OF INJECTION PUMP	+ cm3/1000s. : 9.0
WITH GOVERNOR	7
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	+ control lever
Rated speed rpm : 1077	position degree : 119.0
guide sleeve travel mm : 10.24	tolerance degree : + 4.0
Tolerance mm : +- 0.15	RATED SPEED
Detect and a section 275	rack travel mm : 12.40
Rated speed rpm : 275 quide sleeve	+ Rated speed rpm : 1040 + Tolerance 1/min : +- 5
travel mm : 2.04	+ Check
Tolerance mm : +- 0.20	+ speed 1/min : +- 10
Rated speed rpm : 704	rack travel mm : 4.00
guide sleeve travel mm : 6.53	Rated speed rpm : 1145 Tolerance 1/min : +- 15
Tolerance mm : + 0.25	+ Check
Rated speed rpm : 400	+ speed 1/min : +- 20
ngted speed tym . 400	rack travel mm : 0.50

Tolerance mm	: +- 0.50
Rated speed rpm	: 1275
LOW IDLE	
control lever position degree tolerance degree	
Setting point w/c	out bumper spring
Rated speed rpm	: 175
CRT mm min.	: > 8.00
Testing:	
Rated speed rpm	: 275
rack travel mm	: 5.30
Tolerance mm	: ← 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 980 : 13.40 : +- 0.05
Rated speed rpm	: 750
rack travel mm	: 13.35
Tolerance mm	: +- 0.05
Rated speed rpm	: 700
rack travel mm	: 13.05
Tolerance mm	: + 0.10
Rated speed rpm	: 600
rack travel mm	: 12.55
Tolerance mm	: + 0.10
Rated speed rpm	: 500
rack travel mm	: 12.05
Tolerance mm	: +- 0.10
Rated speed rpm	: 1000
rack travel mm	: 13.40
Tolerance mm	: +- 0.10
Rated speed rpm	: 980
rack travel mm	: 13.80
Tolerance mm	: +- 0.10

ANEROID/ALTI	TUDE
COMPENSATOR	TEST

SETTING

Rated speed rpm	:	980
Pressure hPa	:	1500
rack travel mm	:	13.40
Tolerance mm	: -	⊢ 0.05

Rated speed rpm : 980
Pressure hPa : rack travel mm : 8.55
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm	: 980
Pressure hPa	: 520
rack travel mm	: 12.20
Tolerance mm	: ← 0.05
Pressure hPa	: 210
rack travel mm	: 9.80
Tolerance mm	: ← 0.15

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure hPa	: 1500
Rated speed rpm Del. quantity	: 750
cm3/1000 strokes Tolerance	: 342.0
cm3/1000 strokes Check tolerance	: + 2.0
cm3/1000s. Spreed Tolerance	: +- 5.0
cm3/1000 strokes Check tolerance	: 8.0
cm3/1000s.	: 12.0
rack travel mm Tolerance mm	: 13.05 : + 0.10
Aneroid pressure	

Aneroid pressure
hPa : Rated speed rpm : 600
Del. quantity
cm3/1000 strokes : 195.0

Tolerance		
cm3/1000 strokes	: +-	1.0
Check tolerance		
cm3/1000s.	: +-	4.0
Spreed		
Tolerance		
cm3/1000 strokes	:	8.0
Check tolerance		
cm3/1000s.	:	12.0

LOW IDLE

Rated speed rpm : 275

Rack travel in mm : 5.30
Tolerance mm : + 0.10
Del. quantity
cm3/1000 strokes : 13.5
Tolerance
cm3/1000 strokes : + 3.0
Check tolerance
cm3/1000s. : + 6.0
Spreed
Tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000 strokes : 8.0
Check tolerance
cm3/1000s. : 12.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 22.07.98 : ISO 4113

Combination No. : 0 402 646 668

Injection pump

Pump designation : PE6P120A320RS7412

EP type number : 0 412 626 953

Governor

Governer design. : RQV275...1000PA1278

: -1K

Governer no.

: 0 421 815 510

Cust. part No. : 1310220/1

Customer—spec. information

Customer : DAF

Motor

: XF 280 M

Power KW

: 280.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 417 413 000

Inlet press. bar : 1.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 145 Tolerance l/h : ← 20.0

Test nozzle holde

assembly

: 1 688 901 105

Opening pressure

: 208.5

Tolerance bar : + 1.5

L02

Test lines : 1 680 750 089

Outside diameter : 8.0

x inside diameter :

3.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 15.0 Tolerance bar : +- 1.0

Prestroke mm : 4.45 Tolerance mm : +- 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : +- 1.50

: 1-5-3-6-2-Firing order

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 750

Rack travel in mm : 12.60

Tolerance mm : +- 0.05	+ guide sleeve
	+ travel mm : 3.92
Del. quantity	+ Tolerance mm : + 0.25
cm3/1000 strokes : 303.0	1
	+ Rated speed rpm : 1310
Tolerance	guide sleeve
cm3/1000 strokes : +- 1.0	travel mm : 13.50
Chor todo strokes . The 1.0	Tolerance mm : +- 0.50
Check tolerance	T Total arice iiiii . T 0.30
	T
cm $3/1000$ s. : \leftarrow 4.0	CUITAGE OF SECUE DOCUTTON
	+ GUIDE SLEEVE POSITION
Spreed	†
	†
Tolerance	+ control lever
cm3/1000 strokes : 5.0	+ position degree : -1
·	+ Rated speed rpm : 1171
Check tolerance	+
cm3/1000s. : 9.0	+ Rack travel in mm : 10.70
	→ Tolerance mm : ← 2.00
	+
Rated speed rpm : 275	+ FULL LOAD DELIVERY AT FULL LOAD STOP
	1
Rack travel in mm : 5.30	+ Rated speed rpm : 750
Tolerance mm : +- 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 13.5	+ Del. quantity
Tolerance	+ cm3/1000 strokes : 303.0
cm3/1000 strokes : +- 3.0	Tolerance
Check tolerance	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
Spreed	+ cm3/1000s. : $+$ 4.0
Tolerance	+ Spreed
cm3/1000 strokes : 8.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 5.0
cm3/1000s. : 12.0	+ Check tolerance
	+ cm3/1000s. : 9.0
	+
(E) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	
	+ CONTROL LEVER
	+
GUIDE SLEEVE TRAVEL	+ control lever
	position degree : 118.0
Rated speed rpm : 1062	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 10.04	+ RATED SPEED
Tolerance mm : +- 0.15	rack travel mm : 11.35
TO COT CAT TO CHAIN	+ Rated speed rpm : 1050
Rated speed rpm · 275	
Rated speed rpm : 275	+ Tolerance 1/min : +- 5
guide sleeve	+ Tolerance 1/min : +- 5 + Check
guide sleeve travel mm : 2.04	+ Tolerance 1/min : +- 5
guide sleeve	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
guide sleeve travel mm : 2.04 Tolerance mm : +- 0.20	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00
guide sleeve travel mm : 2.04 Tolerance mm : + 0.20 Rated speed rpm : 697	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150
guide sleeve travel mm : 2.04 Tolerance mm : + 0.20 Rated speed rpm : 697 guide sleeve	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15
guide sleeve travel mm : 2.04 Tolerance mm : +- 0.20 Rated speed rpm : 697 guide sleeve travel mm : 6.48	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15 Check
guide sleeve travel mm : 2.04 Tolerance mm : + 0.20 Rated speed rpm : 697 guide sleeve	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15
guide sleeve travel mm : 2.04 Tolerance mm : + 0.20 Rated speed rpm : 697 guide sleeve travel mm : 6.48 Tolerance mm : + 0.25	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15 Check speed 1/min : +- 20
guide sleeve travel mm : 2.04 Tolerance mm : +- 0.20 Rated speed rpm : 697 guide sleeve travel mm : 6.48	Tolerance 1/min : +- 5 Check speed 1/min : +- 10 rack travel mm : 4.00 Rated speed rpm : 1150 Tolerance 1/min : +- 15 Check

Tolerance mm Rated speed rpm		Rated speed rpm : 775 Pressure hPa : 1500 rack travel mm : 12.65 Tolerance mm : + 0.05	
LOW IDLE	· · · · · · · · · · · · · · · · · · ·	+ Rated speed rpm : 775 Pressure hPa : rack travel mm : 8.50 Tolerance mm : +- 0.20	
control lever		Total di la constanti di la co	
position degree	: 71.0	+ MEASUREMENT	
tolerance degree	: +- 4.0	+	
Setting point w/o	out bumper spring	Raited speed rpm : 775	
Rated speed rpm	. 175	+ Pressure hPa : 450 - rack travel mm : 12 10	
Nated speed Tpill	. 115	rack travel mm : 12.10 Tolerance mm : + 0.05	
CRT mm min.	: > 7.80	+	
		Pressure hPa : 170	
Testing:		† rack travel mm : 9.90	
Datad amagd	. 275	+ Tolerance mm : +- 0.10	
Rated speed rpm rack travel mm Tolerance mm	;	İ	
Tolerance mo	. נאט. כ י +- חר חר	I	
TOTAL GRICE MAIL	5.10	FUEL DELIVERY CHARACTERISTICS	_
Rated speed rpm	: 300	1	
		Aneroid pressure	
TORQUE CONTROL		+ hPa : 1500	
Rated speed rpm	: 750	+ Rated speed rpm : 980	
rack travel mm	: 12.60	† Del. quantity	
Tolerance mm	: +- 0.05	+ cm3/1000 strokes : 272.0	
8 -4-4	. 000	+ Tolerance	
Rated speed rpm	: 9 0:) · 42.35	+ cm3/1000 strokes : +- 2.0 + Check tolerance	
Rated speed rpm rack travel mm Tolerance mm	· +- 0.10	cm3/1000s. : + 5.0	
, a cortain por min		hPa : 1500 Rated speed rpm : 980 Del. quantity cm3/1000 strokes : 272.0 Tolerance cm3/1000 strokes : +- 2.0 Check tolerance cm3/1000s. : +- 5.0 Spreed Tolerance cm3/1000 strokes : 8.0	
Rated speed rpm	: 900	Tolerance	
rack travel mm	: 12.60	- cm3/1000 strokes : 8.0	
Tolerance mm	: +- 0.10	† Check tolerance	
~	700	+ cm3/1000s. : 12.0	
Rated speed rpm	: 700 : 12.30	†	
rack travel mm Tolerance mm	: 12.30 : +- 0.10	nack travel mm · 12 40	
ioterance imi	. 0.10	rack travel mm : 12.60 Tolerance mm : +- 0.10	
Rated speed rpm	: 600	Total di lice initi	
rack travel mm			
rack travel mm Tolerance mm	: +- 0.10	Aneroid pressure	
		├ hPa : -	
Rated speed rpm	: 500	+ Rated speed rpm : 600	
rack travel mm Tolerance mm	: 11.40	+ Del. quantity	
iolerance mm	: +- 0.10	+ cm3/1000 strokes : 184.0 + Tolerance	
		+ cm3/1000 strokes : +- 1.0	
ANEROID/ALTITUDE		Check tolerance	
COMPENSATOR TEST		- cm3/1000s. : +- 4.0	
		Spreed	
		+ Tolerance	
SETTING		+ cm3/1000 strokes : 8.0	
		+	

Check tolerance		
cm3/1000s.	:	12.0

LOW IDLE

Rated speed rpm	:		275	
Rack travel in mm Tolerance mm	-		5.30 0.10	
Del. quantity cm3/1000 strokes Tolerance	:		13.5	
cm3/1000 strokes Check tolerance	:	+-	3.0	
cm3/1000s. Spreed	:	+-	6.0	
Tolerance cm3/1000 strokes Check tolerance	:		8.0	
cm3/1000s.	:		12.0	

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 21.07.98 Test oil : ISO 4113

Combination No. : 0 402 648 603

Injection pump

Pump designation : PE8P120A720LS7427T

EP type number : 0 412 628 919

Governor

Governer design. : RQ750PA1227-1 Governer no. : 0 421 801 812

Cust. part No. : 1391886

Customer—spec. information

Customer : SCANIA

Motor

: DSI(C)14...A,M

TEST BENCH REQUIREMENTS

Inlet line : 4.1

Vibration

damper

(RoBo diaphragm) : 3.2

Test oil inlet

temp. °C 40 Tolerance $^{\circ}$ C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5

L06

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.45 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50

Tolerance mm : + 1.50

Firing order : 1-2A- 7- 3A- 4

: -5A - 6

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.30

Check

tolerance °NW : **←** 0.75

Start of delivery mark

Tolerance : +- 0.10

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 16.45

Tolerance mm : + 0.05

	†	Rated speed rpm	: 700
Del. quantity cm3/1000 strokes :	324.0	Aneroid pressure hPa	: 1500
	+	Del. quantity	
Tolerance cm3/1000 strokes :	+ 1.0	cm3/1000 strokes Tolerance	: 324.0
		cm3/1000 strokes	: 1.0
Check tolerance cm3/1000s. :	+ 10.0	Check tolerance cm3/1000s.	: + 10.0
Spreed		Spreed Tolerance	
	+	cm3/1000 strokes	: 8.C
Tolerance cm3/1000 strokes :	8.0	Check tolerance cm3/1000s.	: 12.0
Check tolerance	12.0		
cm3/1000s. :	12.0	CONTROL LEVER	
	1	control lever	
	1	position degree	: 28.0
Rack travel in mm :	6.50	tolerance degree	
Tolerance mm :	+ 0.10		
Del. quantity	+	control lever	
cm3/1000 strokes :	38.0	position degree	
Tolerance	+	tolerance degree	: +- 4.0
cm3/1000 strokes :	+ 4.0 +		
Check tolerance	+		
•	+- 6.0	ASSEMBLY GOVERNOR	SETTING
Spreed	†	Dahad assad www	750
Tolerance cm3/1000 strokes :	5.0	Rated speed rpm rack travel mm	: 750 : 15.50
Check tolerance	J.U	rack travet mm	: 15.50
cm3/1000s.	9.0	Rated speed rpm	: 785
CIII37 10003.	Ţ	Tolerance 1/min	
	1	rack travel mm	: 4.00
(B) SETTING OF INJE	CTION PUMP		
WITH GOVERNOR	+	rack travel mm	: 0.50
	+	Tolerance mm	: +- 0.50
		Rated speed rpm	: 850
GUIDE SLEEVE TRAVEL	<u> </u>		
Rated speed rpm :	759	Rated speed rpm	: 751
guide sleeve travel mm :	4.86	rack travel mm	: 15.50
	+ 0.15	Dated apped nom	: 786
rocerance man.	T 1.15	Rated speed rpm Tolerance 1/min	: +- 4
Rated speed rpm :	797	rack travel mm	: 4.00
guide sleeve	1	TOOK CI GVCC IIIII	. 4.00
travel mm :	10.00	rack travel mm	: 0.50
	+ 0.25 +	Tolerance mm	: +- 0.50
· · · · · · · · · · · · · · · · · · ·	1	Rated speed rpm	: 850
Rated speed rpm :	850		-
guide sleeve	+		
travel mm :	11.50	Rated speed rpm	: 752
Tolerance mm :	+ 0.50	rack travel mm	: 15.50
		Rated speed rpm	: 787
FULL LOAD DELIVERY	AT FULL LOAD STOP	Tolerance 1/min	: 101 : +- 4
FOLL FOUR PLLIVER! /	T	rack travel mm	: 4.00
	T	FROM CLEACT HAIL	. 4.00

rack travel mm Tolerance mm Rated speed rpm	
Rated speed rpm	: 753
rack travel mm	: 15.50
Rated speed rpm	: 788
Tolerance 1/min	: ← 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: + 0.50
Rated speed rpm	: 850
Rated speed rpm	: 754
rack travel mm	: 15.50
Rated speed rpm	: 789
Tolerance 1/min	: +- 4
rack travel mm	: 4.00
rack travel mm Tolerance mm Rated speed rpm	: +- 0.50
Rated speed rpm	: 755
rack travel mm	: 15.50
Rated speed rpm	: 790
Tolerance 1/min	: ← 4
rack travel mm	: 4.00
rack travel mm	: 0.50
Tolerance mm	: +- 0.50
Rated speed rpm	: 850
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 16.45 : ← 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	

Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 12.50 : ← 0.20
MEASUREMENT	
Rated speed rpm	: 500

Pressure hPa : 420 rack travel mm : 13.60 Tolerance mm : + 0.20

Pressure hPa : 680 rack travel mm : 15.05 Tolerance mm : + 0.05

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : Rated speed rpm : 500
Del. quantity
cm3/1000 strokes : 221.0
Tolerance
cm3/1000 strokes : + 1.0
Check tolerance
cm3/1000s. : + 7.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 12.50
Tolerance mm : + 0.20
Del. quantity
cm3/1000 strokes : 180.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

End of test specification sheet

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 16.45
Tolerance mm : + 0.05

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 16.07.98 Test oil : ISO 4113

Combination No. : 0 402 648 817

Injection pump

Pump designation : PE8P120A320LS7801

: -10

EP type number : 0 412 628 851

Governor

Governer design. : RQ300/1050PA762-16 Governer no. : 0 421 801 620

Cust. part No. :

Customer-spec, information Customer : MB-NFZ Motor : OM442 A

: 269.0 Power KW

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C 40 Tolerance °C : +- 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Overflow quantity
min. l/h : 110
Tolerance l/h : +- 10.0

Test nozzle holde

: 1 688 901 105 assembly

Opening pressure

: 208.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter : 2.5 x length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

firing order : 8-7-2-6-3 :-5-4-1

Phasing : 0-45-90-135-180

: -225-270-315

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery mark

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Del. quantity

cm3/1000 strokes : 205.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance	
cm3/1000s. : +- 4.0	+ GUIDE SLEEVE POSITION
Spreed	+
·	+ control lever
Tolerance	position degree : 109
cm3/1000 strokes : 4.0	+ Rated speed rpm : 600
Check tolerance	+ Rack travel in mm : 20.00
cm3/1000s. : 7.0	+ Tolerance mm : + 0.80
	Total arise min
	FULL LOAD DELIVERY AT FULL LOAD STOP
Rated speed rpm : 300	TOLL EDAD DELIVERY AT TOLL LOAD STOP
rated speed (pi) . 500	Rated speed rpm : 500
Dools thought in my 4 20	
Rack travel in mm: 6.20	+ Aneroid pressure
Tolerance mm : + 0.20	† hPa : 1050
Del. quantity	+ Del. quantity
cm3/1000 strokes : 16.0	+ cm3/1000 strokes : 205.0
Tolerance	+ Tolerance
cm3/1000 strokes : +- 3.0	+ cm3/1000 strokes : +- 1.0
Check tolerance	+ Check tolerance
$cm3/1000s.$: \leftarrow 5.0	+ cm3/1000s. : +- 4.0
Spreed	+ Spreed
Tolerance	+ Tolerance
cm3/1000 strokes : 5.0	+ cm3/1000 strokes : 4.0
Check tolerance	+ Check tolerance
cm3/1000s. : 8.0	+ cm3/1000s. : 7.0
	1
(B) SETTING OF INJECTION PUMP	İ
(D) SELLENO OL TROCCITOR LOIR	
	1 CONTROL EVER
WITH GOVERNOR	CONTROL LEVER
	+
WITH GOVERNOR	
	control lever position degree : 97.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL	
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050	control lever position degree : 97.0 tolerance degree : + 4.0
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve guide sleeve	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve guide sleeve	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 6.70 guide sleeve travel mm : 6.70 Guide sleeve travel mm : 6.70 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 6.70 guide sleeve travel mm : 6.70 Guide sleeve travel mm : 6.70 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870 guide sleeve travel mm : 6.20	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870 guide sleeve travel mm : 6.20 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870 guide sleeve travel mm : 6.20 Tolerance mm : + 0.10 Rated speed rpm : 6.20 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 LOW IDLE
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870 guide sleeve travel mm : 6.20 Tolerance mm : + 0.10 Rated speed rpm : 6.20 Tolerance mm : + 0.10 Rated speed rpm : 1170 guide sleeve	control lever position degree : 97.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : +- 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : +- 15 rack travel mm : 0.75 Tolerance mm : +- 0.75 Rated speed rpm : 1300 LOW IDLE control lever
WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1050 guide sleeve travel mm : 6.80 Tolerance mm : + 0.10 Rated speed rpm : 300 guide sleeve travel mm : 2.30 Tolerance mm : + 0.10 guide sleeve travel mm : 6.00 Tolerance mm : + 0.10 Rated speed rpm : 870 guide sleeve travel mm : 6.20 Tolerance mm : + 0.10 Rated speed rpm : 6.20 Tolerance mm : + 0.10	control lever position degree : 97.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1103 Tolerance 1/min : + 8 rack travel mm : 4.00 Rated speed rpm : 1185 Tolerance 1/min : + 15 rack travel mm : 0.75 Tolerance mm : + 0.75 Rated speed rpm : 1300 LOW IDLE

	+ Check
Setting point w/out bumper spring	speed 1/min : > 80
Rated speed rpm : 200	speed 1/min : < 240
CRT mm min. : > 8.00	FUEL DELIVERY CHARACTERISTICS
Testing:	TOLE VELLACITY CHARACTERISTICS
Rated speed rpm : 300 rack travel mm : 6.20 Tolerance mm : + G.20	Aneroid pressure + hPa : 1050 + Rated speed rpm : 1050 - Del. quantity
rack travel mm : 2.00 Rated speed rpm : 400 Tolerance 1/min : +- 20	cm3/1000 strokes : 179.5 Tolerance cm3/1000 strokes : + 1.5 Check tolerance
TORQUE CONTROL	cm3/1000s. : + 4.5 - Spreed - Tolerance
Dimension a mm : 0.75	cm3/1000 strokes : 7.0 Check tolerance
Rated speed rpm : 1050 rack travel mm : 12.80 Tolerance mm : + 0.10	cm3/1600s. : 10.0
Rated speed rpm : 500 rack travel mm : 14.10 Tolerance mm : +- 0.10	rack travel mm : 14.10 Tolerance mm : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	Aneroid pressure hPa : - Rated speed rpm : 500 bel. quantity cm3/1000 strokes : 147.0
SETTING	Tolerance + cm3/1000 strokes : +- 1.0
Rated speed rpm : 600 Pressure hFa : -	+ Check tolerance + cm3/1000s. : +- 4.0 + Spreed
Rated speed rpm : 600 Pressure hPa : 300 rack travel mm : 1.00 Tolerance mm : + 0.10	Tolerance cm3/1000 strokes: 7.0 Check tolerance cm3/1000s.: 10.0
MEASUREMENT	
Rated speed rpm : 600	STARTING FUEL DELIVERY
Pressure hPa : 400	Rated speed rpm : 100 Del. quantity
rack travel mm : 2.05 Tolerance mm : + 0.15	cm3/1000 strokes : 182.5 Tolerance cm3/1000 strokes : + 7.5
Start interlock	- + Check tolerance - cm3/1000s. : +- 11.5
Rated speed rpm : > 100 Rated speed rpm : < 220	
	+ LOW IDLE

Rated speed rpm	: 300	
Rack travel in mm Tolerance mm Del. quantity	: : +-	6.20 0.20
cm3/1000 strokes Tolerance	:	16.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s. Spreed	: +-	6.0
Tolerance cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 014

Injection pump

Pump designation : PES6P120A720LS8037 EP type number : 0 412 926 024

Governor

Governer design. : RQV250...1050PA1236K

Governer no. : 0 421 815 970

Cust. part No. : 1370101

Customer—spec. information Customer : SCANIA Motor : DSC1202

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5
Tolerance bar : + 0.1

Overflow quantity

min. l/h : 85 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : +- 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.40 Tolerance mm : ← 0.05 Check

tolerance mm : + 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 180.00 Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

	Tolerance mm : + 0.25
Rack travel in mm : 14.05 - Tolerance mm : +- 0.05 -	- Rated speed rpm : 290 - guide sleeve - travel mm : 2.62
Del. quantity cm3/1000 strokes : 330.0	Tolerance mm : +- 0.25
Tolerance	- Rated speed rpm : 1310 - guide sleeve - travel mm : 13.50 - Tolerance mm : +- 0.50
Check tolerance cm3/1000s. : + 10.0	GUIDE SLEEVE POSITION
Spreed	
Tolerance - 8.0 -	control lever position degree : - 1 Rated speed rpm : 1170
Check tolerance - cm3/1000s. : 14.0 -	Rack travel in mm : 12.10 Tolerance mm : +- 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.60 - Tolerance mm : +- 0.30 - Tolerance mm : +- 0	Rated speed rpm : 775 Aneroid pressure hPa : 1500
<pre>cm3/1000 strokes : 19.0 - Tolerance - cm3/1000 strokes : +- 3.0</pre>	- Del. quantity - cm3/1000 strokes : 330.0 - Tolerance
Check tolerance - 6.0 - 6.0	cm3/1000 strokes : +- 1.0 Check tolerance
Spreed - Tolerance -	- cm3/1000s. : +- 10.0 - Spreed
cm3/1000 strokes : 5.0 - Check tolerance -	- Tolerance - cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	Check tolerance cm3/1000S. : 14.0
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR	CONTROL LEVER
GUIDE SLEEVE TRAVEL	- control lever - position degree : 63.0
Rated speed rpm : 1116 - guide sleeve -	tolerance degree : + 4.0
travel mm : 10.09 - Tolerance mm : +- 0.15 -	control lever position degree : 121.0
Rated speed rpm : 250 -	tolerance degree : +- 4.0
guide sleeve - travel mm : 1.79 -	- RATED SPEED - rack travel mm : 12.10
Tolerance mm : +- 0.20	Rated speed rpm : 1095 Tolerance 1/min : +- 5
Rated speed rpm : 644 guide sleeve travel mm : 4.47	Check speed 1/min : +- 10
'	

rack travel mm : Rated speed rpm : Tolerance 1/min : Check speed 1/min : rack travel mm : Tolerance mm : Rated speed rpm :	4.00 1180 + 15 + 20 0.50 + 0.50 1300
LOW IDLE	
control lever position degree : tolerance degree :	75.0 +- 4.0
control lever position degree : tolerance degree :	17.0 + 4.0
Setting point w/out	bumper spring

CRT mm min. : > 7.30

Testing:

Rated speed rpm :

Rated speed rpm : 250 rack travel mm : 4.60

150

Tolerance mm : + 0.30

Rated speed rpm : 275

TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 775 : 14.05 : + 0.05
Rated speed rpm	: 650
rack travel mm	: 13.05
Tolerance mm	: + 0.10
Rated speed rpm	: 1050
rack travel mm	: 13.10
Tolerance mm	: ← 0.10

Rated speed rpm : 675
rack travel mm : 13.30
Tolerance mm : + 0.30

ANEROID/ALTITUDE	
COMPENSATOR TEST	

SETTING

Rated speed rpm	:	775
Pressure hPa	:	1500
rack travel mm	:	14.05
Tolerance mm	: -	⊦- 0.10

Rated speed rpm : 775
Pressure hPa : =
rack travel mm : 8.50
Tolerance min : +- 0.20

MEASUREMENT

Rated speed rpm : 775

Pressure nPa : 300 rack travel mm : 9.80 Tolerance mm : +- 0.15

Pressure hPa : 610 rack travel mm : 11.50 Tolerance mm : +- 0.05

Start interlock

Rated speed rpm : > 100 Rated speed rpm : < 170

Check

speed 1/min : > 80 Check speed 1/min : < 190

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure
hPa : 1500
Rated speed rpm : 650
Del. quantity
cm3/1000 strokes : 319.0
Tolerance
cm3/1000 strokes : +- 4.0
Check tolerance
cm3/1000s. : +- 10.0

Aneroid pressure

hPa : 1500 Rated speed rpm : 1050 rack travel mm : 13.10

Tolerance mm	:	+-	0.10
Del. quantity cm3/1000 strokes	:		272.0
Tolerance cm3/1000 strokes Check tolerance	:	+-	4.0
cm3/1000s.	:	+	8.0

Aneroid pressure			
hPa	:	1	500
Rated speed rpm	:		675
Del. quantity			
cm3/1000 strokes	:		323.0
Tolerance			
cm3/1000 strokes	:	+-	4.0
Check tolerance			
cm3/1000s.	:	+	10.0

Aneroid pressure			
hPa	:		-
Rated speed rpm	:		50C
Del. quantity			
cm3/1000 strokes	:		192.0
Tolerance			
cm3/1000 strokes	:	+-	1.0
Check tolerance			
cm3/1000s.	:	+	4.0

STARTING FUEL DELIVERY

Set starting CRT at K-cam.

Rated speed rpm	:		100
rack travel mm	:		10.70
Tolerance mm	:	+-	0.50
Del. quantity			
cm3/1000 strokes	:		210.0
Tolerance			
cm3/1000 strokes	:	+-	20.0
Check tolerance			
cm3/1000s.	:	+-	24.0

LOW IDLE

Rated sneed rpm	:	250
Rack travel in mm Tolerance mm Del. quantity		4.60 - 0.30
cm3/1000 strokes Tolerance	:	19.0
cm3/1000 strokes	: +	3.0

Check tolerance cm3/1000s. Spreed	: +-	6.0
Tolerance		
cm3/1000 strokes Check tolerance	:	5.0
cm3/1000s.	:	8.0

End of test specification sheet

L16

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

: 17.07.98

Combination No. : 0 402 946 015

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

Governer no. : 0 421 814 157

Cust. part No. : 1383795

Customer-spec. information Customer : SCANIA Motor : DSC 913

TEST BENCH REQUIREMENTS

Inlet line : EHPB

Test oil inlet

temp. °C Tolerance °C

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 105 Tolerance l/h : + 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure

: 251.5 bar Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	
Rack travel in mm : 12.90	Rated speed rpm : 470
Tolerance mm : +- 0.05	guide sleeve
Totel arce min 0.05	travel mm : 4.09
No.1	
Del. quantity	Tolerance mm : +- 0.25
cm3/1000 strokes : 300.0	+
	Rated speed rpm : 1470
Tolerance	+ guide steeve
cm3/1000 strokes : + 1.0	+ travel mm : 11.50
one, togo per ones	+ Tolerance mm : + 0.50
Check tolerance	- T locerance iiiii . F 0.30
**************************************	T
cm3/1000s. : ← 8.0	
	_ + FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	+
	+ Rated speed rpm : 600
Tolerance	+ Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1500
the root serences.	Del. quantity
Chank talananca	
Check tolerance	cm3/1000 strokes : 300.0
cm3/1000s. : 12.0	+ Tolerance
	_ + cm3/1000 strokes : +- 1.0
	+ Check tolerance
	$\frac{1}{2}$ cm3/1000s. : +- 8.0
Rated speed rpm : 250	Spreed
The same production of the same	+ Tolerance
Rack travel in mm : 7.60	- cm3/1000 strokes : 8.0
Tolerance mm : + 0.10	+ Check tolerance
Del. quantity	+ cm3/1000s. : 12.0
cm3/1000 strokes : 40.0	†
Tolerance	+
cm3/1000 strokes : +- 3.0	
Check tolerance	
$cm3/1000s.$: \leftarrow 6.0	1
Spreed	+ control lever
Tolerance	position degree : 57.0
cm3/1000 strokes : 5.0	
CHAZ GUU SI COKES : J.O	+ tolerance degree : +- 4.0
- · · · · · · · · · · · · · · · ·	1
Check tolerance	†
- · · · · · · · · · · · · · · · ·	+ + control lever
Check tolerance	position degree : 120.0
Check tolerance	position degree : 120.0
Check tolerance	· · · · · · · · · · · · · · · · · · ·
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	position degree : 120.0 tolerance degree : + 4.0
Check tolerance cm3/1000s. : 8.0	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check
Check tolerance cm3/1000S. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5
Check tolerance cm3/1000S. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00
Check tolerance cm3/1000S. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve travel mm : 748 guide sleeve travel mm : 6.17	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50
Check tolerance cm3/1000s. : 8.0 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm : 1058 guide sleeve travel mm : 7.89 Tolerance mm : + 0.15 Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : + 0.20 Rated speed rpm : 748 guide sleeve	position degree : 120.0 tolerance degree : + 4.0 RATED SPEED rack travel mm : 11.90 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10 rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50

LOW IDLE

control lever

position degree : 89.0 tolerance degree : +- 4.0

control lever

position degree : 25.0 tolerance degree : + 4.0

Setting point w/out bumper spring

Rated speed rpm : 150

CRT mm min. : > 9.80

Testing:

Rated speed rpm : 250 rack travel mm : 7.60

Tolerance mm : +- 0.10

Rated speed rpm : 300

TORQUE CONTROL

Rated speed rpm : 600 rack travel mm : 12.90 Tolerance mm : + 0.05

Rated speed rpm : 1000 rack travel mm : 12.90 Tolerance mm : + 0.10

ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 500
Pressure hPa : 1500
rack travel mm : 12.90
Tolerance mm : + 0.05

Rated speed rpm : 500
Pressure hPa : rack travel mm : 10.40
Tolerance mm : +- 0.20

MEASUREMENT

Rated speed rpm : 500

Pressure hPa : 350 rack travel mm : 11.15

Tolerance mm : +- 0.15

Pressure hPa : 750 rack travel mm : 12.15 Tolerance mm : +- 0.05

Start interlock

Rated speed rpm : < 190 Rated speed rpm : > 150

Check

speed 1/min : < 210 Check

speed 1/min : > 130

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa : 1500 Rated speed rpm : 1000

Del. quantity

cm3/1000 strokes : 295.0

Tolerance

cm3/1000 strokes : +- 4.0

Check tolerance

cm3/1000s. : +- 8.0

Aneroid pressure

nPa : -Rated speed rpm : 500 Del. quantity

cm3/1000 strokes : 190.0

Tolerance

cm3/1000 strokes : +- 1.0

Check tolerance

cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance

cm3/1000 strokes : +- 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	+	7. <i>6</i> 0 0.10
cm3/1000 strokes Tolerance	:		40.0
cm3/1000 strokes	:	+-	3.0
Check tolerance cm3/1000S. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes	:		5.0
Check tolerance cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 016

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -1

Governer no. : 0 421 814 158

Cust. part No. : 1369528

Customer—spec. information Customer : SCANIA Motor : DSC 912

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : +- 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION FUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50 Tolerance mm : + 0.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery blocking

Tolerance : +-0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

•		1
Rack travel in min Tolerance mm	: 12.70 : + 0.05	<u> </u>
Del. quantity cm3/1000 strokes	: 292.0	+
Tolerance cm3/1000 strokes	: + 1.0	<u> </u>
Check tolerance cm3/1000s.	: + 9.0	<u> </u>
Spreed	-	F
Tolerance cm3/1000 strokes	: 8.0	
Check tolerance cm3/1000s.	: 12.0	
	•	1
Rated speed rpm	: 250	+
Rack travel in mm Tolerance mm	: 7.60 : ← 0.10	T +
Del. quantity cm3/1000 strokes	: 40.0	‡
Tolerance	. – 70	+
cm3/1000 strokes Check tolerance	: ← 3.0	1
cm3/1000s. Spreed	: ← 6.0	†
Tolerance		<u> </u>
cm3/1000 strokes	: 5.0	†
Check tolerance cm3/1000s.	: 8.0	İ
Chist (dagg.	. 0.0	+
(B) SETTING OF IN	JECTION PUMP	† †
	<u> </u>	t
GUIDE SLEEVE TRAV	EL -	F
Rated speed rpm	: 1057	‡
guide sleeve		+
travel mm Tolerance mm	: 7.89 - : +- 0.15 -	İ
Total differ that	- 0.15	F
Rated speed rpm	: 250 -	+
guide sleeve travel mm	: 1.33	I
Tolerance mm	: + 0.20	+
Rated speed rpm	: 748 -	‡
guide sleeve	. 47	+
travel mm Tolerance mm	: 6.17 - : ← 0.25 -	İ
10 COL GITCO TIME		ı

Rated speed rpm : 470 guide sleeve travel mm 4.09 : +- 0.25 Tolerance mm Rated speed rpm : 1470 guide sleeve : 11.50 travel mm Tolerance mm : +- 0.50 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm 600 Aneroid pressure hPa 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000s. : 4- 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. 12.0 CONTROL LEVER control lever position degree : 57.0 tolerance degree : +- 4.0 control lever position degree : 120.0 tolerance degree : +- 4.0 RATED SPEED : 11.70 : 1045 rack travel mm Rated speed rpm : +- 5 Tolerance 1/min Check speed 1/min : +- 10 : 4.00 rack travel mm Rated speed rpm : 1235 : +-Tolerance 1/min 15 Check speed 1/min 20 rack travel mm : 0.50 Tolerance mm : +- 0.50

LOW IDLE	
control lever position degree tolerance degree	: 89.0 : +- 4.0
control lever position degree tolerance degree	: 25.0 : +- 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 9.70
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.60 : +- 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	
Rated speed rpm rack travel mm Tolerance mm	: 1000 : 12.70 : +- 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.70 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 250 : 11.30

Tolerance mm	: ← 0.15
Pressure hPa rack travel mm Tolerance mm	: 620 : 12.30 : + 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 150 : < 190
Check speed 1/min Check	: > 130
speed 1/min	: < 210
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 1000
Del. quantity cm3/1000 strokes Tolerance	: 288.0
cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000S.	: ← 9.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 210.0
Check tolerance cm3/1000s.	: +- 6.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm Tolerance mm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	
LOW IDLE	

LOW IDLE

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	-	7.60 0.10
cm3/1000 strokes Tolerance	:		40.0
cm3/1000 strokes Check tolerance	:	+	3.0
cm3/1000s. Spreed	:	+-	6.0
Tolerance cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 017

Injection pump

Pump designation : PES6P120A720RS8039

EP type number : 0 412 926 026

Governor

Governer design. : RQV250...950PA1243

Governer no. : 0 421 814 162

Cust. part No. : 1374808

Customer-spec. information

Customer : SCANIA

Motor

: DSC 11.79

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

Tolerance °C

: - 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5

Tolerance bar : + 0.1

Overflow quantity

min. L/h : 115 Tolerance L/h : +- 10.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

: 251.5

Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.15 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 20.50 Tolerance mm : +- 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery blocking

Tolerance : **←** 0.50

Check

tolerance $^{\circ}NW$: +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

L25

1	
Rack travel in mm : 11.90 Tolerance mm : + 0.05	- Rated speed rpm : 470 - guide sleeve - travel mm : 4.09
Del. quantity cm3/1000 strokes : 298.0	Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	- Rated speed rpm : 1260 - guide sleeve - travel mm : 11.50
Check tolerance cm3/1000s. : + 9.0	Tolerance mm : +- 0.50
Spreed	GUIDE SLEEVE POSITION
Tolerance cm3/1000 strokes : 8.0	- - control lever - position degree : — 1 - Rated speed rpm : 1165
Check tolerance cm3/1000s. : 14.0	Rack travel in mm : 10.90 Tolerance mm : + 1.30
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm: 5.60 Tolerance mm: + 0.10 Del. quantity cm3/1000 strokes: 21.0 Tolerance cm3/1000 strokes: + 3.0 Check tolerance cm3/1000s. : + 6.0 Spreed Tolerance cm3/1000 strokes: 5.0 Check tolerance cm3/1000 strokes: 5.0 Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 700 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 298.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 14.0
WITH GOVERNOR	- CONTROL LEVER
GUIDE SLEEVE TRAVEL Rated speed rpm : 1008	control lever position degree : 55.0 tolerance degree : +- 4.0
guide sleeve travel mm : 8.61 Tolerance mm : + 0.15	control lever position degree : 119.0 tolerance degree : +- 4.0
Rated speed rpm : 250 guide sleeve travel mm : 1.33 Tolerance mm : +- 0.20	RATED SPEED : 10.90 Rated speed rpm : 995
Rated speed rpm : 732 guide sleeve	Tolerance 1/min : +- 5 Check speed 1/min : +- 10
travel mm : 6.35 Tolerance mm : + 0.25	rack travel mm : 4.00

Rated speed rpm Tolerance 1/min Check speed 1/min rack travel mm Tolerance mm Rated speed rpm	: +- 15 : +- 20 : 0.50 : +- 0.50
LOW IDLE	
control lever position degree tolerance degree	: 81.0 : +- 4.0
control lever position degree tolerance degree	: 17.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CR's mm min.	: > 7.90
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 5.60 : + 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 700 : 11.90 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	: 950 : 11.90 : +- 0.05
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 11.90 : + 0.05

500

Pressure hPa rack travel mm Tolerance mm	: - : 9.20 : +- 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm Tolerance mm	: 350 : 10.30 : +- 0.15
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.40 : +- 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: > 100 : < 170
Check speed 1/min Check	: > 80
speed 1/min	: < 190
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1500 : 950 : 282.0
hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance	: 1500 : 950 : 282.0 : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : $\leftarrow 0.50$

Del. quantity cm3/1000 strokes : 225.0

Tolerance cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s.

: **←** 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 5.60 Tolerance mm

: **←** 0.10

Del quantity

cm3/1000 strokes : 21.0

Tolerance

cm3/1000 strokes : \leftarrow 3.0

Check tolerance

cm3/1000s. : +-6.0

Spreed

Tolerance

cm3/1000 strokes :

5.0

Check tolerance cm3/1000s.

8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 018

Injection pump

Pump designation : PES6P120A720RS8041 EP type number : 0 412 926 027

Governor

Governer design. : RQV250...950PA1253 Governer no. : 0 421 814 166

Cust. part No. : 1383215

Customer-spec. information Customer : SCANIA : DSC 11.75 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 110 Tolerance L/h : + 10.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

: 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 4.40 Tolerance mm : +- 0.05 Check

: **←** 0.10 tolerance mm

Rack travel in mm : 20.50Tolerance mm : $\leftarrow 0.50$

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

	1
Rack travel in mm : 11.20 Tolerance mm : + 0.05	Rated speed rpm : 420 guide sleeve travel mm : 3.37
Del. quantity cm3/1000 strokes : 261.0	Tolerance mm : + 0.25
	Rated speed rpm : 1390
Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 11.50
	+ Tolerance mm : + 0.50
Check tolerance cm3/1000s. : +- 8.0	CUITAGE CLEGUE POCITION
Spreed	+ GUIDE SLEEVE POSITION +
Tolerance	t control lever
cm3/1000 strokes : 8.0	position degree : -1
51107 1000 Ut 101100 1	Rated speed rpm : 1235
Check tolerance	+ 1233
cm3/1000s. : 14.0	+ Rack travel in mm : 10.20
	+ Tolerance mm : + 1.30
	+
Rated speed rpm : 250	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 5.60	Rated speed rpm : 700
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	hPa : 1500
cm3/1000 strokes : 16.0	Del. quantity
Tolerance	+ cm3/1000 strokes : 261.0
	Tolerance
Check tolerance	+ cm3/1000 strokes : + 1.0
cm3/1000s. : + 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : +- 8.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	+ cm3/1000s. : 14.0
	+
(B) SETTING OF INJECTION PUMP	†
WITH GOVERNOR	
	+ CONTROL LEVER
	†
GUIDE SLEEVE TRAVEL	+ control lever
5	+ position degree : 59.0
Rated speed rpm : 1006	tolerance degree : +- 4.0
guide sleeve	†
travel mm : 7.25	+ control lever
Tolerance mm : + 0.15	+ position degree : 112.0
	+ tolerance degree : +- 4.0
Rated speed rpm : 250	+
guide sleeve	+ RATED SPEED
travel mm : 1.31	+ rack travel mm : 10.20
Tolerance mm : + 0.20	+ Rated speed rpm : 995
	+ Tolerance 1/min : +- 5
Rated speed rpm : 673	+ Check
guide sleeve	+ speed 1/min : +- 10
travel mm : 4.96	1
Tolerance mm : + 0.25	rack travel mm : 4.00
rocutation in the contract of	I THEN LEGICE HIRD . M.DU

Rated speed rpm : 1130 Tolerance 1/min : + 15 Check speed 1/min : + 20 rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1250	Pressure hPa : - rack travel mm : 8.20 Tolerance mm : + 0.20 MEASUREMENT Rated speed rpm : 500 Pressure hPa : 290 rack travel mm : 9.00 Tolerance mm : + 0.15
LOW IDLE	Pressure hPa : 540 rack travel mm : 10.40 Tolerance mm : + 0.05
position degree : 66.0	
tolerance degree : +- 4.0	† Start interlock
control lever position degree : 12.0 tolerance degree : +- 4.0	Rated speed rpm : > 100 Rated speed rpm : < 170 Check speed 1/min : > 80 Check speed 1/min : < 190
Setting point w/out bumper spring	+ speed 1/min : > 80
	Check
Rated speed rpm : 150	+ speed 1/min : < 190
CRT mm min. : > 7.00	+
Testing:	FUEL DELIVERY CHARACTERISTICS
5	
Rated speed rpm : 250	+ Aneroid pressure
Rated speed rpm : 250 rack travel mm : 5.60 Tolorage mm : 5.60	+ hPa : 1500
Rated speed rpm : 250 rack travel mm : 5.60 Tolerance mm : +- 0.10	hPa : 1500 + Rated speed rpm : 950
Rated speed rpm : 250 rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0
rack travel mm : 5.60 Tolerance mm : +- 0.10	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance
rack travel mm : 5.60 Tolerance mm : +- 0.10	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0
rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : +- 4.0
rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance
rack travel mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0
rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : +- 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 7.0 Aneroid pressure hPa :
rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : +- 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500
rack travel mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity
Tolerance mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : +- 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : 11.20 Tolerance mm : 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance
rack travel mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : 11.20 Tolerance mm : - 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0
Tolerance mm : 5.60 Tolerance mm : +- 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : +- 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : 11.20 Tolerance mm : 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
rack travel mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : 11.20 Tolerance mm : - 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0
rack travel mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : 11.20 Tolerance mm : - 0.05	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
Tolerance mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 500	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 STARTING FUEL DELIVERY
Tolerance mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 20.50
Tolerance mm : 5.60 Tolerance mm : + 0.10 Rated speed rpm : 300 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 11.20 Tolerance mm : + 0.05 Rated speed rpm : 950 rack travel mm : 11.20 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 500	hPa : 1500 Rated speed rpm : 950 Del. quantity cm3/1000 strokes : 245.0 Tolerance cm3/1000 strokes : + 4.0 Check tolerance cm3/1000s. : + 7.0 Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 153.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 4.0 STARTING FUEL DELIVERY

Del. quantity

cm3/1000 strokes : 170.0

Tolerance

cm3/1000 strokes : \leftarrow 20.0

Check tolerance

cm3/1000s. : +- 24.0

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 5.60 Tolerance mm : +- 0.10 Del. quantity

cm3/1000 strokes : 16.0

Tolerance

cm3/1000 strokes : +-3.0

Check tolerance

cm3/1000s. : **←** 6.0

Spreed

Tolerance

cm3/1000 strokes : 5.0

Check tolerance

cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.98 : ISO 4113

Combination No. : 0 402 945 020

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -2

Governer no.

: 0 421 814 168

Cust. part No. : 1369545

Customer—spec. information Customer : SCANIA

Motor

: DSC 9.11

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

assembly

min. l/h : 105 Tolerance l/h : + 15.0

Test nozzle holde

: 1 688 901 104

Opening pressure

bar

: 251.5

Tolerance bar : + 1.5

M₀5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : +- 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm : ← 0.50

Firing order : 1-5-3-6-2-

: 4

Fhasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : +- 0.50

Check

tolerance °NW : + 0.75

Barrel no.

: 1

BASIC SETTING

Rack travel in m	m · 12 70	t Pated aread nam	: 470
Tolerance mm		+ Rated speed rpm + guide sleeve	: 470
toterance inii	. — 0.05	+ guide steeve + travel mm	: 4.09
Del. quantity		Tolerance mm	: +- 0.25
cm3/1000 strokes	· 277 በ	T local ance has	
Chiar 1000 Strokes	. 211.0	Rated speed rpm	: 1470
Tolerance		guide sleeve	. 1410
cm3/1000 strokes	: +- 1.0	+ travel mm	: 11.50
		+ Tolerance mm	: +- 0.50
Check tolerance			
cm3/1000s.	: +- 9.0	+	
		+ FULL LGAD DELIVE	RY AT FULL LOAD STOP
Spr ee d		†	
* -1	·	Rated speed rpm	
Tolerance	. 0.0	+ Aneroid pressure	
cm3/1000 strokes	: 8.0	+ hPa	: 1500
Check tolerance		+ Del. quantity + cm3/1000 strokes	: 277.0
cm3/1000s.	: 12.0	+ Tolerance	. 211.U
UIID/ 10003.	. 16.0	cm3/1000 strokes	: +- 1.0
		Check tolerance	
		+ cm3/1000s.	: +- 9.0
Rated speed rpm	: 250	Spreed	•••
• •		+ Tolerance	
Rack travel in m		+ cm3/1000 strokes	: 8.0
Tolerance mm	: +- 0.10	+ Check tolerance	
Del. quantity		+ cm3/1000s.	: 12.0
cm3/1000 strokes	: 45.0	· †	
Tolerance	7 0	†	
cm3/1000 strokes Check tolerance	: +- 3.0	CONTROLLEUED	
cm3/1000s.	: +- 6.0	+ CONTROL LEVER	
Spreed	0.0	- control lever	
Tolerance		position degree	: 56.0
cm3/1000 strokes	: 5.0	tolerance degree	
Check tolerance		+	, , , , , ,
cm3/1000s.	: 8.0	+ control lever	
		+ position degree	: 119.0
		+ tolerance degree	: +- 4.0
(B) SETTING OF IT	NJECTION PUMP	† 	
WITH GOVERNOR		+ RATED SPEED	. 44 70
		+ rack travel mm + Rated speed rpm	
GUIDE SLEEVE TRAN	VFI	Tolerance 1/min	
JOSES OFFERE IVA	7	Check	
Rated speed rpm	: 1057	speed 1/min	: +- 10
guide sleeve		+	
travel mm	: 7.89	+ rack travel mm	
Tolerance mm		+ Rated speed rpm	: 1225
		+ Tolerance 1/min	: +- 15
Rated speed rpm	: 250	+ Check	
guide sleeve	. 4 77	+ speed 1/min	: +- 20
travel mm	: 1.33	†	. 0.50
Tolerance mm	: ← 0.20	rack travel mm	: 0.50 : +- 0.50
Rated speed rpm	: 748	Tolerance mm Rated speed rpm	: +- U.DU · 1350
guide sleeve	. 140	T Nateu speed rpill	. טענו
travel mm	: 6.17	1	
Tolerance mm		+	
		•	

LOW IDLE	
control lever position degree tolerance degree	: 89.0 : +- 4.0
control lever position degree tolerance degree	: 24.0 : ← 4.0
Setting point w/o	out bumper spring
Rated speed rpm	: 150
CRT mm min.	: > 9.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.70 : ← 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.30 : + 0.05
Rated speed rpm rack travel mm Tolerance mm	
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.30 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 10.80 : + 0.20

Tolerance mm	: +- 0.15	
Pressure hPa rack travel mm Tolerance mm	: 600 : 11.90 : ← 0.05	
Start interlock		
Rated speed rpm Rated speed rpm	: < 190 : > 150	
Check speed 1/min	: < 210	
Check speed 1/min	: > 130	
FUEL DELIVERY CHA	RACTERISTICS	
Aneroid pressure hPa Rated speed rpm	: 1500 : 1600	
Del. quantity cm3/1000 strokes		
Tolerance cm3/1000 strokes Check tolerance	: +- 4.0	
cm3/1000s.	: 9.0	
Aneroid pressure		
Rated speed rpm Del. quantity	: 500	
cm3/1000 strokes Tolerance	: 210.0	
cm3/1000 strokes Check tolerance	: +- 1.0	
cm3/1000s.	: +- 7.0	
STARTING FUEL DEL	IVERY	
Rated speed rpm rack travel mm Tolerance mm	: 100 : 20.50 : + 0.50	
Del. quantity cm3/1000 strokes Tolerance	: 260.0	
cm3/1000 strokes Check tolerance	: +- 20.0	
cm3/1000s.	: +- 24.0	
LOW IDLE		
LOM INCE		

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MEASUREMENT

Pressure hPa

Rated speed rpm : 500

Pressure hPa : rack travel mm :

3**3**0 11.20

Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	: :	+-	7.70 0.10
cm3/1000 strokes Tolerance	:		45.0
cm3/1000 strokes	:	+-	3.0
cm3/1000s.	:	+-	6.0
Tolerance cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Test oil

: 17.07.98 : ISO 4113

Combination No. : 0 402 946 021

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265 Governer no. : 0 421 801 800

Cust. part No. : 1380278

Customer-spec. information Customer : SCANIA : DSC 9.12

Motor

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : ← 20.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure bar : 251.5 Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 20.50 Tolerance mm : + 0.20

Firing order : 1-5- 3- 6- 2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

		1
Rack travel in mm Tolerance mm	: 12.70 : +- 0.05	Rated speed rpm : 364 guide sleeve
5.1		+ travel mm : 3.50
Del. quantity cm3/1000 strokes	: 292.0	Tolerance mm : +- 0.10
7 Lamana		+ Rated speed rpm : 490
Tolerance		guide sleeve
cm3/1000 strokes	: ← 1.0	+ travel mm : 4.50
		+ Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: +- 9.0	+ Rated speed rpm : 1146
		+ guide sleeve
Spreed		travel mm : 5.50
		† Tolerance mm : + 0.10
Tolerance		+
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1610
		guide steeve
Check tolerance		+ travel mm : 11.50
cm3/1000s.	: 12.0	+ Tolerance mm : +- 0.50
J. 70000.	. 12.0	10000 01100 11111
		GUIDE SLEEVE POSITION
Rated speed rpm	: 250	
nated speed 1 pm	. 20	T
Dools travel in my	. 7.40	T and laws
Rack travel in mm		+ control lever
	: +- 0.10	+ position degree : 109
Del. quantity		+ Rated speed rpm : 600
cm3/1000 strokes	: 40.0	†
Tolerance		+ Rack travel in mm : 16.40
		•
cm3/1000 strokes	: + 3.0	+ Tolerance mm : + 0.80
	: +- 3.0	•
cm3/1000 strokes Check tolerance	: + 3.0 : + 6.0	•
cm3/1000 strokes Check tolerance cm3/1000s.		Tolerance mm : + 0.80
cm3/1000 strokes Check tolerance cm3/1000s. Spread		•
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance	: +- 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes	: +- 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance	: +- 6.0 : 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance	: +- 6.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance	: +- 6.0 : 5.0	FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 6.0 : 5.0 : 8.0	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE	: +- 6.0 : 5.0 : 8.0	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: +- 6.0 : 5.0 : 8.0	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE	: +- 6.0 : 5.0 : 8.0	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUSTING GOVERNOR	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUSTING GOVERNOR	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEN Rated speed rpm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP L : 1073 : 4.82	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: +- 6.0 : 5.0 : 8.0 ECTION PUMP L : 1073 : 4.82 : +- 0.15 : 250	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000S. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP L : 1073 : 4.82 : +- 0.15 : 250	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJUNITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Tolerance mm Tolerance mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33 : +- 0.20	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33 : +- 0.20 : 990	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 12.0 CONTROL LEVER control lever position degree : 47.0 tolerance degree : + 4.0
cm3/1000 strokes Check tolerance cm3/1000s. Spread Tolerance cm3/1000 strokes Check tolerance cm3/1000s. (B) SETTING OF INJE WITH GOVERNOR GUIDE SLEEVE TRAVEL Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm Rated speed rpm guide sleeve travel mm Tolerance mm	: +- 6.0 : 5.0 : 8.0 ECTION PUMP : 1073 : 4.82 : +- 0.15 : 250 : 1.33 : +- 0.20 : 990 : 4.50	Tolerance mm : + 0.80 FULL LOAD DELIVERY AT FULL LOAD STOP Rated speed rpm : 600 Aneroid pressure hPa : 1500 Del. quantity cm3/1000 strokes : 292.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance cm3/1000s. : + 9.0 Spreed Tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000 strokes : 8.0 Check tolerance cm3/1000s. : 12.0

tolerance degree : +- 4.0 +	
RATED SPEED rack travel mm : 11.70 Rated speed rpm : 1045 Tolerance 1/min : + 5 Check speed 1/min : + 10	ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500
rack travel mm : 4.00 Rated speed rpm : 1235 Tolerance 1/min : + 15 Check speed 1/min : + 20	Pressure hPa : 1500 rack travel mm : 12.70 Tolerance mm : +- 0.05 Rated speed rpm : 500
rack travel mm : 0.50 Tolerance mm : + 0.50 Rated speed rpm : 1350	Pressure hPa : - rack travel mm : 10.80 Tolerance mm : +- 0.20 MEASUREMENT
†	Rated speed rpm : 500
LOW IDLE	Pressure hPa : 250 rack travel imm : 11.30 Tolerance mm : + 0.15
control lever position degree : 87.0 tolerance degree : +- 4.0 control lever	Pressure hPa : 620 rack travel mm : 12.30 Tolerance mm : 12.35
position degree : 25.0 + tolerance degree : + 4.0 +	Start interlock
Setting point w/out bumper spring	Rated speed rpm : > 150 Rated speed rpm : < 190
Rated speed rpm : 150	Check
CRT mm min. :> 9.50	speed 1/min : > 130 Check
Testing:	speed 1/min : < 210
Rated speed rpm : 250 + rack travel mm : 7.60 + Tolerance mm : + 0.10	FUEL DELIVERY CHARACTERISTICS
Rated speed rpm : 355 rack travel mm : 2.00	Aneroid pressure hPa : 1500 Rated speed rpm : 1000 Del. quantity
TORQUE CONTROL Rated speed rpm : 600 rack travel mm : 12.70 Tolerance mm : + 0.05	cm3/1000 strokes : 288.0 Tolerance cm3/1000 strokes : +- 4.0 Check tolerance cm3/1000s. : +- 9.0
Rated speed rpm : 1000 rack travel mm : 12.70 Tolerance mm : + 0.10	Aneroid pressure hPa : - Rated speed rpm : 500

Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : + 1.0 Check tolerance

: **←** 6.0 cm3/1000s.

STARTING FUEL DELIVERY

100 Rated speed rpm : rack travel min : 20.50

Del. quantity

cm3/1000 strokes : 270.0

Tolerance

cm3/1000 strokes : + 20.0

Check tolerance

: **←** 24.0 cm3/1000s.

LOW IDLE

Rated speed rpm : 250

Rack travel in mm: 7.60 Tolerance mm : + 0.10

Del. quantity

40.0 cm3/1000 strokes :

Tolerance

cm3/1000 strokes : + 3.0

Check tolerance

cm3/100Cs. : **←** 6.0

Spreed

Tolerance

5.0 cm3/1000 strokes :

Check tolerance

cm3/1000S.8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 17.07.98 Test oil : ISO 4113

Combination No. : 0 402 946 022

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-1

Governer no. : 0 421 801 801

Cust. part No. : 1380280

Customer-spec. information Customer : SCANIA

: DSC 9.11 Motor

TEST BENCH REQUIREMENTS

Inlet line : EHA3

Test oil inlet

temp. °C : 40
Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : + 20.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar

Tolerance bar : + 1.5

M13

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

2.0

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : ← 1.0

Prestroke mm : 4.00 Tolerance mm : 1 → 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 20.50

Tolerance mm : + 0.20

Firing order : 1-5-3-6-2-

: 4

: 0-60-120-180-240 Phasing

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

		1
Rack travel in mm Tolerance mm		Rated speed rpm : 364 guide sleeve
		+ travel mm : 3,50
Del. quantity cm3/1000 strokes	: 277.0	Tolerance mm : + 0.10
		Rated speed rpm : 490
Tolerance		+ guido sleeve
cm3/1000 strokes	: +- 1.0	+ travel mm : 4.50
they rede serones	, , , ,	+ Tolerance mm : + 0.10
Check tolerance		Total arise limit
cm3/1000s.	: +- 8.0	Rated speed rpm : 1146
aid iddus.	. 1- 0.0	t in the state of
0 d		guide sleeve
Spreed		travel mm : 5.50
		+ Tolerance mm : +- 0.10
Tolerance		†
cm3/1000 strokes	: 8.0	+ Rated speed rpm : 1610
		+ guide sleeve
Check tolerance		+ travel mm : 11.50
cm3/1000s.	: 12.0	\downarrow Tolerance mm : \leftarrow 0.50
		1
		
		↓ GUIDE SLEEVE POSITION
Rated speed rpm	. 250	1 00100 30000 103111014
Rated speed Thin	. 200	T
Danie Americal de com	חל ל	T control layer
Rack travel in mm		+ control lever
Tolerance mm	: ← 0.10	position degree : 109
Del. quantity		+ Rated speed rpm : 600
cm3/1000 strokes	: 45.0	+
Tolerance		+ Rack travel in mm : 16.40
cm3/1000 strokes	: ← 3.0	+ Tolerance mm : +- 0.80
Check tolerance		1
cm3/1000s.	: +- 6.0	
Spreed		FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance		TOCK LONG DELITERY A. FOLL LONG STOP
cm3/1000 strokes	: 5.0	Rated speed rpm : 600
Check tolerance	. 7.0	Aneroid pressure
cm3/1000s.	: 8.0	
CMS/ 10005.	. 0.0	+ hPa : 1500
		+ Del. quantity
/n) are	15077611 MINT	+ cm3/1000 strokes : 277.0
(B) SETTING OF IN	JECTION PUMP	+ Tolerance
WITH GOVERNOR		+ cm3/1000 strokes : + 1.0
		+ Check tolerance
		+ cm3/1000s. : +- 8.0
GUIDE SLEEVE TRAV	EL	+ Spreed
		+ Tolerance
Rated speed rpm	: 1073	+ cm3/1000 strokes : 8.0
guide sleeve		+ Check tolerance
travel mm	: 4.82	cm3/1000s. : 12.0
Tolerance mm	: ← 0.15	12.0
TO COT GITTE THE	0.17	Ī
Batad anaid na	. 250	T
Rated speed rpm	: 250	CONTROL LEVED
guide sleeve	. 4 77	+ CONTROL LEVER
travel mm	: 1.33	†
Tolerance mm	: 0.20	+ control lever
		+ position degree : 38.0
Rated speed rpm	: 990	+ tolerance degree : +- 4.0
guide sleeve		
travel mm	: 4.50	+ control lever
Tolerance mm	: + 0.10	position degree : 106.0
	2	

tolerance degree : +-	4.0 +		
RATED SPEED rack travel mm : 1 Rated speed rpm : 10 Tolerance 1/min : +- Check speed 1/min : +-	5	ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm :	: 500
rack travel mm : Rated speed rpm : 12 Tolerance 1/min : +- Check	25 15	Pressure hPa : rack travel mm : Tolerance mm	1500 12.30 +- 0.05
<pre>speed 1/min : +- rack travel mm :</pre>	20 +	Rated speed rpm : Pressure hPa : rack travel mm : Tolerance mm	500 - 10.80
Tolerance mm : +- Rated speed rpm : 13	0.50		+ 0.20
	+	MEASUREMENT	
	‡	Rated speed rpm	500
LOW IDLE	++	rack travel mm :	330 11.20 + 0.15
control lever position degree :		Pressure hPa	: 600
tolerance degree : +-	4.0		11.90 + 0.05
control lever	35.0		
position degree : tolerance degree : +-	25.0 4.0	Start interlock	
Setting point w/cut bump	er spring	Rated speed rpm :	: < 190 : > 150
Rated speed rpm : 1	50	Check	
CRT mm min. :>	9.50	speed 1/min : Check	< 210
Testing:	†	speed 1/min	: > 130
Rated speed rpm : 2 rack travel mm : Tolerance mm : +-		FUEL DELIVERY CHARA	ACTERISTICS
rack travel mm : Rated speed rpm : 3 Tolerance 1/min : +-	55	Aneroid pressure hPa : Rated speed rpm : Del. quantity cm3/1000 strokes :	1500 1000
TORQUE CONTROL Rated speed rpm : 6 rack travel mm : 1		Tolerance cm3/1000 strokes : Check tolerance	
Tolerance mm : +-			+- 8.0
Rated speed rpm : 10 rack travel mm : 1 Tolerance mm : +	2.30	Aneroid pressure hPa : Rated speed rpm :	500

Del. quantity cm3/1000 strokes : 210.0 Tolerance cm3/1000 strokes : +- 1.0 Check tolerance

6.0

STARTING FUEL DELIVERY

cm3/1000s.

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 270.0 Tolerance cm3/1000 strokes : - 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 250 7.70 Rack travel in mm : Tolerance mm : **+-** 0.10 Del. quantity 45.0 cm3/1000 strokes : Tolerance cm3/1000 strokes : +-3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.98 : ISO 4113

Combination No. : 0 402 946 023

Injection pump

Pump designation : PES6P120A320RS8038 EP type number : 0 412 926 025

Governor

Governer design. : RQ250/1000PA1265-2

Governer no. : 0 421 801 808

Cust. part No. : 1385102

Customer—spec. information Customer : SCANIA

Motor

: DSC 9.15

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

Tolerance °C

: **←** 2.0

Overflow valve : 2 417 413 082

Inlet press. bar :

2.5

Tolerance bar : + 0.1

Overflow quantity

min. l/h : 110 Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

: 251.5

Tolerance bar : + 1.5

Test Lines : 1 680 750 008

Outside diameter :

x inside diameter :

x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : Tolerance bar : + 1.0

Prestroke mm : 4.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm

: +- 0.20

Firing order

: 1-5-3-6-2-

: 4

Phasing

: 0-60-120-180-240

: -300

Tolerance

: +- 0.30

Check

tolerance °NW : + 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.30

tolerance °NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

+	
Rack travel in mm: 12.90	Rated speed rpm : 360
Tolerance mm : + 0.05	quide sleeve
Totel arice mili	travel mm : 3.50
T T	
Del. quantity	Tolerance mm : +- 0.10
cm3/1000 strokes : 300.0	
	Rated speed rpm : 490
Tolerance +	guide sleeve
cm3/1000 strokes : \leftarrow 1.0	travel mm : 4.50
	Tolerance mm : +- 0.10
Check tolerance	75551 41.755 1
cm3/1000s. : + 9.0	Rated speed rpm : 1134
T 7.9	
	guide sleeve
Spreed	travel mm : 5.50
†	Tolerance mm : +- 0.10
Tolerance +	
cm3/1000 strokes : 8.0 +	Rated speed rpm : 1600
1	guide sleeve
Check tolerance	travel mm : 11.50
cm3/1000s. : 12.0	Tolerance mm : +- 0.50
T	rocerance man . 1- 0.30
†	CUITAG OLEGUE PROTETON
T	GUIDE SLEEVE POSITION
Rated speed rpm : 250 +	
†	
Rack travel in mm: 7.60 +	control lever
Tolerance mm : \leftarrow 0.10 $+$	position degree : 109
Del. quantity	Rated speed rpm : 600
cm3/1000 strokes : 40.0	Marca speca (pii/
1	Rack travel in mm : 16.40
Tolerance	
cm3/1000 strokes : +- 3.0 +	Tolerance mm : +- 0.80
Check tolerance +	
$cm3/1000s$. : \leftarrow 6.0 $+$	
Spreed +	FULL LOAD DELIVERY AT FULL LOAD STOP
Tolerance +	
cm $3/1000$ strokes : 5.0 $+$	Rated speed rpm : 600
Check tolerance +	Aneroid pressure
cm3/1000S. : 8.0	hPa : 1500
1 0.0	Del. quantity
Ţ	
	cm3/1000 strokes : 300.0
(B) SETTING OF INJECTION PUMP	Tolerance
WITH GOVERNOR +	$cm3/1000$ strokes : \leftarrow 1.0
+	Check tolerance
	cm3/1000s. : +- 9.0
GUIDE SLEEVE TRAVEL.	Spreed
 	Tolerance
Rated speed rpm : 1060	cm3/1000 strokes : 8.0
guide sleeve	Check tolerance
travel mm : 4.82	cm3/1000s. : 12.0
Tolerance mm : + 0.15	(115) 10000 12.0
Toterance in . Toterance in T	
Data diamand mum	
Rated speed rpm : 250	ACAPTROL I SUSS
guide sleeve +	CONTROL LEVER
travel mm : 1.44 +	
Tolerance mm : \leftarrow 0.20 $+$	control lever
+	position degree : 47.0
Rated speed rpm : 970	tolerance degree : +- 4.0
	The second of th
QUIDE SLEEVE +	
guide sleeve + travel mm · 450 +	control lever
travel mm : 4.50 +	control lever
	control lever position degree : 108.0

tolerance degree : +- 4.0	†
RATED SPEED rack travel mm : 11.90 - Rated speed rpm : 1045 - Tolerance 1/min : +- 5 Check speed 1/min : +- 10	ANEROID/ALTITUDE COMPENSATOR TEST SETTING
rack travel mm : 4.00 - Rated speed rpm : 1240 - Tolerance 1/min : + 15 Check	Rated speed rpm : 500 Pressure hPa : 1500 rack travel mm : 12.90 Tolerance mm : + 0.05
speed 1/min : ← 20 - rack travel mm : 0.50 - Tolerance mm : ← 0.50 -	Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.80 Tolerance mm : + 0.20
Rated speed rpm : 1350 -	MEASUREMENT
-	Rated speed rpm : 500
LOW IDLE	Pressure hPa : 325 rack travel mm : 10.55 Tolerance mm : +- 0.15
control lever	Pressure hPa : 760 - rack travel mm : 12.15 - Tolerance mm : +- 0.05
position degree : 25.0 - tolerance degree : +- 4.0 -	Start interlock
Setting point w/out bumper spring	Rated speed rpm : < 190 Rated speed rpm : > 150
Rated speed rpm : 150	Check
CRT mm min. : > 9.50	speed 1/min : < 210
Testing:	speed 1/min : > 130
Rated speed rpm : 250 - rack travel mm : 7.60 - Tolerance mm : +- 0.10 -	FUEL DELIVERY CHARACTERISTICS
rack travel mm : 2.00 Rated speed rpm : 355 Tolerance 1/min : +- 20	Aneroid pressure hPa : 1500 Rated speed rpm : 1000 Del. quantity cm3/1000 strokes : 295.0
TORQUE CONTROL Rated speed rpm : 600 - rack travel mm : 12.90 - Tolerance mm : +- 0.05	Tolerance : ∠93.0 Tolerance : ∠93.0 cm3/1000 strokes : ← 4.0 Check tolerance cm3/1000s. : ← 9.0
Rated speed rpm : 1000 - rack travel mm : 12.90 - Tolerance mm : +- 0.10 -	Aneroid pressure hPa : - Rated speed rpm : 500

Del. quantity
cm3/1000 strokes : 172.0
Tolerance
cm3/1000 strokes : +- 1.0
Check tolerance
cm3/1000s. : +- 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 265.0 Tolerance cm2/1000 strokes : + 20.0 Check tolerance cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm : 250 7.60 Rack travel in mm : Tolerance mm : +- 0.10 Del. quantity cm3/1000 strokes : 40.0 Tolerance cm3/1000 strokes : - 3.0 Check tolerance cm3/1000s. : +- 6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance cm3/1000s. 8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.98 : ISO 4113

Combination No. : 0 402 946 025

Injection pump

Pump designation : PES6P120A320RS8038

EP type number : 0 412 926 025

Governor

Governer design. : RQV250...1000PA1239

: -3

Governer no. : 0 421 814 178

Cust. part No. : 1383494

Customer-spec. information

Customer : SCANIA

Motor

: DSC 915

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C

: 40

Tolerance °C : +- 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 100 Tolerance l/h : +- 20.0

Test nozzle holde

assembly

: 1 688 901 104

Opening pressure

bar

: 251.5

Tolerance bar : + 1.5

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Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter :

x length mm : 600

2.0

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 4.00Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 20.50

Tolerance mm : + 0.20

: 1-5- 3- 6- 2-: 4 Firing order

: 0-60-120-180-240 Phasing

: -300

: +- 0.30 Tolerance

Check

tolerance °NW : + 0.75

Start of delivery blocking

Tolerance

: +- 0.50

Check

tolerance °NW

: +- 0.75

Barrel no.

: 1

BASIC SETTING

Rated speed rpm : 600

	+
Rack travel in mm : 12.90 Tolerance mm : + 0.05	Rated speed rpm : 470 guide sleeve travel mm : 4.09
Sal mandida:	· · · · · · · · · · · · · · · · · · ·
Del. quantity cm3/1000 strokes : 300.0	+ Tolerance mm : + 0.25
	Rated speed rpm : 1470
Tolerance	+ guide sleeve
cm3/1000 strokes : $+-$ 1.0	† travel mm : 11.50
· · · · · · · · · · · · · · · · · · ·	† Tolerance mm : + 0.50
Check tolerance	+
cm3/1000s. : +- 8.0	
	+ FULL LOAD DELIVERY AT FULL LOAD STOP
Spreed	Data departed and 100
Talamana	Rated speed rpm : 600
Tolerance	Aneroid pressure
cm3/1000 strokes : 8.0	+ hPa : 1500
Charle had an annual	Del. quantity
Check tolerance	cm3/1000 strokes : 300.0
cm3/1000s. : 12.0	Tolerance
	+ cm3/1000 strokes : +- 1.0
	+ Check tolerance
	+ cm3/1000s. : +- 8.0
Rated speed rpm : 250	+ Spreed
	+ Tolerance
Rack travel in mm : 7.60	+ cm3/1000 strokes : 8.0
Tolerance mm : +- 0.10	+ Check tolerance
Del. quantity	+ cm3/1000s. : 12.0
cm3/1000 strokes : 40.0	+
Tolerance	+
cm3/1000 strokes : +- 3.0	
Check tolerance	+ CONTROL LEVER
cm3/1000s. : +- 6.0	+
Spreed	+ control lever
Tolerance	position degree : 57.0
cm3/1000 strokes : 5.0	tolerance degree : + 4.0
Check tolerance	+
cm3/1000s. : 8.0	+ control lever
	position degree : 120.0
	tolerance degree : +- 4.0
(B) SETTING OF INJECTION PUMP	+
WITH GOVERNOR	+ RATED SPEED
	rack travel mm : 11.90
	+ Rated speed rpm : 1045
GUIDE SLEEVE TRAVEL	Tolerance 1/min : +- 5
	+ Check
Rated speed rpm : 1058	+ speed 1/min : +- 10
guide sleeve	+
travel mm : 7.89	+ rack travel mm : 4.00
Tolerance mm : + 0.15	+ Rated speed rpm : 1235
	Tolerance 1/min : +- 15
Rated speed rpm : 250	+ Check
guide sleeve	+ speed 1/min : +- 20
travel mm : 1.33	+
Tolerance mm : +- 0.20	rack travel mm : 0.50
	Tolerance mm : +- 0.50
Rated speed rpm : 748	Rated speed rpm : 1350
guide sleeve	+
travel mm : 6.17	+
Tolerance mm : +- 0.25	+
	•

LOW IDLE	
control lever position degree tolerance degree	: 89.0 : +- 4.0
control lever position degree tolerance degree	: 25.0 : + 4.0
Setting point w/o	ut bumper spring
Rated speed rpm	: 150
CRT num min.	: > 9.80
Testing:	
Rated speed rpm rack travel mm Tolerance mm	: 250 : 7.60 : + 0.10
Rated speed rpm	: 300
TORQUE CONTROL Rated speed rpm rack travel mm Tolerance mm	: 600 : 12.90 : ← 0.05
Rated speed rom rack travel mm Tolerance mm	: 1000 : 12.90 : + 0.10
ANEROID/ALTITUDE COMPENSATOR TEST	
SETTING	
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : 1500 : 12.90 : +- 0.05
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : - : 9.80 : + 0.20
MEASUREMENT	
Rated speed rpm	: 500
Pressure hPa rack travel mm	: 325 : 10.55

Tolerance mm	: + 0.15
Pressure hPa rack travel mm Tolerance mm	: 760 : 12.15 : ← 0.05
Start interlock	
Rated speed rpm Rated speed rpm	: < 190 : > 170
Check speed 1/min Check	: < 210
speed 1/min	: > 150
FUEL DELIVERY CHA	RACTERISTICS
Aneroid pressure hPa Rated speed rpm	: 1500 : 1600
Del. quantity cm3/1000 strokes	: 295.0
Tolerance cm3/1000 strokes Check tolerance	: +- 4.0
cm3/1000s.	: +- 8.0
Aneroid pressure hPa Rated speed rpm	: - : 500
Del. quantity cm3/1000 strokes	
Tolerance cm3/1000 strokes	: + 1.0
Check tolerance cm3/1000s.	: ← 6.0
STARTING FUEL DEL	IVERY
Rated speed rpm rack travel mm	: 100 : 20.50
Tolerance mm Del. quantity	: + 0.50
cm3/1000 strokes Tolerance	: 265.0
cm3/1000 strokes Check tolerance cm3/1000s.	: +- 20.0 : +- 24.0
LOW IDLE	

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Rated speed rpm	:		250
Rack travel in mm Tolerance mm Del. quantity	:	+-	7.60 0. 1 0
cm3/1000 strokes Tolerance	:		40.0
cm3/1000 strokes Check tolerance	:	+-	3.0
cm3/1000s.	:	+-	6.0
Spreed Tolerance			
cm3/1000 strokes Check tolerance	:		5.0
cm3/1000s.	:		8.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 17.07.98 : ISO 4113

Combination No. : 0 402 946 026

Injection pump

Pump designation : PES6P120A720RS8045 EP type number : 0 412 926 028

Governor

Governer design. : RQV350...1100PA1305K

Governer no. : 0 421 815 967

Cust. part No. : 1388631

Customer-spec. information Customer : SCANIA Hotor. : DSI1174M

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 2 417 413 082

Inlet press. bar : 3.0 Tolerance bar : + 0.1

Overflow quantity

min. L/h : 80
Tolerance L/h : + 10.0

Test nozzle holde

: 1 688 901 104 assembly

Opening pressure bar : 251.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0

x Length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 3.65
Tolerance mm : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : **←** 0.30

Check

tolerance °NW : ← 0.75

Start of delivery blocking

Tolerance : \leftarrow 0.10 Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1100

	1
Rack travel in mm: 11.75 Tolerance mm: + 0.05	Rated speed rpm : 460 guide sleeve travel mm : 4.07
Del. quantity cm3/1000 strokes : 250.0	Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : + 1.0	+ Rated speed rpm : 1400 + guide sleeve + travel mm : 13.50
Check tolerance cm3/1000s. : +- 7.0	Tolerance mm : + 0.50
Spreed	GUIDE SLEEVE POSITION
Spi ceu	T
Tolerance cm3/1000 strokes : 8.0	control lever position degree : - 1 Rated speed rpm : 1250
Check tolerance cm3/1000s. : 12.0	+ Rack travel in mm : 10.70
	+ Tolerance mm : + 2.00
Rated speed rpm : 350	FULL LOAD DELIVERY AT FULL LOAD STOP
Rack travel in mm : 4.10	+ Rated speed rpm : 1100
Tolerance mm : + 0.10	+ Aneroid pressure
Del. quantity	+ hPa : 1500
cm3/1000 strokes : 30.0	+ Del. quantity
Tolerance	- cm3/1000 strokes : 250.0
cm3/1000 strokes : +- 3.0	
	Tolerance
Check tolerance	cm3/1000 strokes : + 1.0
cm3/1000s. : + 6.0	+ Check tolerance
Spreed	+ cm3/1000s. : + 7.0
Tolerance	+ Spreed
cm3/1000 strokes : 5.0	+ Tolerance
Check tolerance	+ cm3/1000 strokes : 8.0
cm3/1000s. : 8.0	+ Check tolerance
	+ cm3/1000s. : 12.0
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	<u> </u>
	CONTROL LEVER
GUIDE SLEEVE TRAVEL	+ control lever
	position degree : 64.0
Rated speed rpm : 1165	+ tolerance degree : +- 4.0
guide sleeve	+
travel mm : 10.15	+ control lever
Tolerance mm : + 0.15	position degree : 118.0
	tolerance degree : + 4.0
Rated speed rpm : 350	1200, 200, 000
guide sleeve	RATED SPEED
travel mm : 2.00	rack travel mm : 10.70
Tolerance mm : + 0.20	Rated speed rpm : 1145
TO COT OF THE PARTY OF THE PART	Tolerance 1/min : + 5
Rated speed rpm : 755	+ Check
guide sleeve	+ speed 1/min : +- 10
	Speed Millin . The 10
_	T most travel / 00
Tolerance mm : +- 0.25	+ rack travel mm : 4.00

Rated speed rpm	: 1235	.1
Tolerance 1/min	: +- 15	-
Check speed 1/min	: +- 20	+
rack travel mm	: 0.50	+
Tolerance mm	: +- 0.50]
Rated speed rpm	: 1300	1
		+
LOW THE		7
LOW IDLE		1
control lever		
position degree	: 71.0	1
tolerance degree	: + 4.0	1
control lever	. 17.0	1
position degree tolerance degree	: 17.0 : +- 4.0	1
-		1
Setting point w/o		1
Rated speed rpm	: 250	1
CRT mm min.	: > 6.50	
Testing:		1
Rated speed rpm	: 350	1
rack travel mm	: 4.10	4
Tolerance mm	: +- 0.10	-
Rated speed rpm	: 275	1
		1
TORQUE CONTROL Rated speed rpm	: 1100	
rack travel mm	: 11.75	
Tolerance mm	: +- 0.05	4
Rated speed rpm	: 700	
rack travel mm	: 10.65	-
Tolerance mm	: +- 0.10	
ANEROID/ALTITUDE		-
COMPENSATOR TEST		-
		1
SETTING		-
Rated speed rpm	: 1100	1
Pressure hPa	: 1500	1
rack travel mm Tolerance mm	: 11.75 : +- 0.05	1
		+
Rated speed rpm	: 1100	+

Pressure hPa rack travel mm Tolerance mm	: - : 7.10 : + 0.20
MEASUREMENT	
Rated speed rpm	: 1100
Pressure hPa rack travel mm Tolerance mm	: 340 : 8.35 : + 0.25
Pressure hPa rack travel mm Tolerance mm	: 800 : 10.65 : + 0.05
FUEL DELIVERY CHA	
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm	RACTERISTICS : 1500 : 700
FUEL DELIVERY CHA Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes	: 1500
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes	: 1500 : 700
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance	: 1500 : 700 : 263.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s.	: 1500 : 700 : 263.0 : ← 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000 strokes Check tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm	: 1500 : 700 : 263.0 : ← 4.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000s.	: 1500 : 700 : 263.0 : ← 4.0 : ← 6.0
Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000 strokes Tolerance cm3/1000s. Aneroid pressure hPa Rated speed rpm Del. quantity cm3/1000s.	: 1500 : 700 : 263.0 : ← 4.0 : ← 6.0

STARTING FUEL DELIVERY

Rated speed rpm : 100
rack travel mm : 7.10
Tolerance mm : + 0.50
Del. quantity
cm3/1000 strokes : 100.0
Tolerance
cm3/1000 strokes : + 20.0
Check tolerance
cm3/1000s. : + 24.0

LOW IDLE

Rated speed rpm	:	350
Rack travel in mm Tolerance mm Del. quantity	: : +-	4.10 0.10
cm3/1000 strokes Tolerance	:	30.0
cm3/1000 strokes Check tolerance	: +-	3.0
cm3/1000s.	: +-	6.0
Tolerance	:	5.0
cm3/1000s.	:	8.0

Note remarks

Refer to Service Info for test and adjustment instructions.
See microcard(s) W400/...

Edition : 17.07.98 Test oil : 130 4713

Combination No. : 0 402 945 031

Injection pump

Pump designation : PES6P120A320RS8050 EP type number : 0 412 926 032

Governor

Governer design. : RQ250/1000PA1342 Governer no. : 0 421 801 822

Cust. part No. : 1388694

Customer—spec. information Customer : SCANIA Motor : DSI 9E01 Power KW : 170.0

TEST BENCH REQUIREMENTS

Inlet line : EHAB

Test oil inlet

temp. °C : 40 Tolerance °C : \leftarrow 2.0

Overflow valve : 2 417 413 095

Inlet press. bar : 2.5 Tolerance bar : + 0.1

Overflow quantity

min. l/h : 80 Tolerance l/h : + 10.0

Test nozzle holde

assembly : 1 688 901 104

Opening pressure

bar : 251.5 Tolerance bar : + 1.5 Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.00 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300

Tolerance : \leftarrow 0.50

Check

tolerance °NW : + 0.75

Start of delivery mark

Tolerance : \leftarrow 0.50

Check

tolerance °NW : +- 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

	1	
Rack travel in mm Tolerance mm	: 12.30 : ← 0.05	Rated speed rpm : 410 guide sleeve travel mm : 3.50
Del. quantity cm3/1000 strokes	: 240.0	Toterance mm : +- 0.10
Tolerance cm3/1000 strokes	: + 1.0	Rated speed rpm : 530 guide sleeve travel mm : 4.50
Check tolerance		Tolerance mm : +- 0.10 Rated speed rpm : 1670
Spreed	+	guide sleeve travel mm : 11.50
Tolerance cm3/1000 strokes	: 8.0	Tolerance mm : + 0.50
Check tolerance cm3/1000S.	: 12.0	GUIDE SLEEVE POSITION
CMS/ (UUUS.	12.0	control lever position degree : 108
Rated speed rpm	: 285	Rated speed rpm : 600 Rack travel in mm : 16.00
	: 5.20 : + 0.10	Tolerance mm : +- 0.60
Del. quantity cm3/1000 strokes Tolerance	: 30.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	+	Rated speed rpm : 700 Aneroid pressure
cm3/1000S. Spreed Tolerance	: ← 6.0	hPa : 1500 Del. quantity cm3/1000 strokes : 240.0
cm3/1000 strokes Check tolerance	+	Tolerance cm3/1000 strokes : +- 1.0
cm3/1000s.	: 8.0	Check tolerance cm3/1000S. : +- 7.0 Spreed
(B) SETTING OF INJE WITH GOVERNOR	ECTION PUMP	Tolerance cm3/1000 strokes : 8.0 Check tolerance
GUIDE SLEEVE TRAVEL	-	cm3/1000s. : 12.0
Rated speed rpm : guide sleeve	: 1061	CONTROL LEVER
travel mm Tolerance mm	: 4.72 : + 0.15	control lever position degree : 43.0
guide sleeve	: 285	tolerance degree : +- 4.0
travel mm Tolerance mm	: 2.17 : + 0.20	control lever position degree : 105.0 tolerance degree : +- 4.0
Rated speed rpm : guide sleeve	: 1000	RATED SPEED
travel mm : Tolerance mm :	: 4.50 : + 0.10	rack travel mm : 11.30 Rated speed rpm : 1058

Tolerance 1/min	: ← 8	1	
Check	, +- 0	Rated speed rpm	: 500
speed 1/min	: +- 10	+ Pressure hPa	: 1500
•		+ rack travel mm	: 12.30
rack travel mm		† Tolerance mm	: +- 0.05
Rated speed rpm Tolerance 1/min	: 1245	† Satadanadan	
Toterance 1/min Check	: +- 15	+ Rated speed rpm	: 500
speed 1/min	: +- 20	rack travel mm	: 10.40
Speca (7)		Pressure hPa rack travel mm Tolerance mm	: +- 0.20
rack travel mm		+	
Tolerance mm		+ MEASUREMENT	
Rated speed rpm	: 1350	† Bakad anaad aa	500
		+ Rated speed rpm	: 500
		Pressure hPa	: 275
	······	- + rack travel mm	: 10.90
LOW IDLE		+ Tolerance mm	: ← 0.15
		+	
control laws		+ Pressure hPa	
control lever position degree	· 85 /3	+ rack travel mm + Tolerance mm	
tolerance degree		Totel diffe limit	3.05
		+	
control lever	.	+ Start interlock	•
position degree	: 21.0	†	. 400
tolerance degree	: +- 4.0	+ Rated speed rpm + Rated speed rpm	: > 190 : < 170
Setting point w/o	out humber shring	T Rated speed (pill	. < 170
detering pottic with	ode bamper op: mg	Check	
Rated speed rpm	: 150	+ speed 1/min	: > 80
		Check	
CRT mm min.	: > 8.00	+ speed 1/min	: < 190
Testing:		İ	
resting.		+ FUEL DELIVERY CHA	RACTERISTICS
Rated speed rpm	: 285	+	
rack travel mm		+	
Tolerance mm	: ← 0.10	+ Aneroid pressure	4500
rack travel mm		+ hPa + Rated speed rpm	: 1500
Rated speed rpm		+ Rated speed rpm + Del. quantity	. 1000
Tolerance 1/min		cm3/1000 strokes	: 214.0
ver mree triitti		+ Tolerance	
			: +- 4.0
TORQUE CONTROL	700	+ Check tolerance	
Rated speed rpm	: /00	+ cm3/1000s.	: +- 6.0
rack travel mm Tolerance mm		<u> </u>	
ioterance mm	, 0.05	Aneroid pressure	
Rated speed rpm	: 1000	+ hPa	: -
rack travel mm Tolerance mm	: 12.30	+ Rated speed rpm	: 500
Tolerance mm	: +- 0.10	+ Del. quantity	
		+ cm3/1000 strokes	: 210.0
ANEDOTO /AL TITLING		Tolerance	40
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes Check tolerance	
COULCIASMICK 1531		+ cm3/1000s.	: +- 4.0
		+	· · · · · · · · · · · · · · · · · · ·
SETTING		+	
		·	

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.50 Tolerance mm : + 0.50 Del. quantity cm3/1000 strokes : 250.0 Tolerance cm3/1000 strokes : + 20.0 Check tolerance

: +- 25.0

LOW IDLE

cm3/1000s.

Rated speed rpm : 285 Rack travel in mm: 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 30.0 Tolerance cm3/1000 strokes : \leftarrow 3.0 Check tolerance cm3/1000s. 6.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance 8.0 cm3/1000s.

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 25.07.98 : ISO 4113

Combination No. : 0 400 863 023

Injection pump

Pump designation : PES3A950410/3RS2905

EP type number : 0 410 893 996

Governor

Governer design. : RSV325...1250A5C861L

Governer no. : 0 420 232 624

Cust. part No. : 0423 1731 KY

Customer-spec. information

Customer : KHD-DMI

Motor

: F3L912/913_NEU

Power KW

: 44.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

: 173.5

Tolerance bar : + 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant. per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : +- 1.0

Prestroke mm : 3.00Tolerance mm : $\leftarrow 0.05$ Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50 Tolerance mm : \leftarrow 1.50

Firing order : 1- 3- 2

: 0-120-240 Phasing Tolerance : +- 0.50

Check

tolerance °NV : ← 0.75

BASIC SETTING

Rated speed rpm : 1250

Rack travel in mm : 11.35

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 76.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance : +- 3.0 cm3/1000s.

Spreed

Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000s. : 8.0	
	CONTROL LEVER
P. A. d	control lever
Rated speed rpm : 325	+ position degree : 102.0 + tolerance degree : + 4.0
Rack travel in mm: 8.50	+
Tolerance mm : +- 0.10	+ RATED SPEED
Del. quantity	+ rack travel mm : 10.35
cm3/1000 strokes : 11.5	+ Rated speed rpm : 1295
Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : + 2.0	1 00
Check tolerance cm3/1000s. : +- 4.5	+ rack travel mm : 4.00
Spreed : 7- 4.5	Rated speed rpm : 1339 Tolerance 1/min : +- 15
Tolerance	T TOTEL WILL . T- 13
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance mm : → 0.55
cm3/1000s. : 9.0	+ Rated speed rpm : 1510
	+
	+ rack travel mm : 4.00
(B) SETTING OF INJECTION PUMP	Rated speed rpm : 1360
WITH GOVERNOR	+ Tolerance 1/min : +- 15
	†
	†
GUIDE SLEEVE POSITION	<u> </u>
GOIDE SEEVE POSITION	LOW IDLE
	1000 1000
control lever	1
position degree : FREE	control lever
Rated speed rpm : 800	position degree : 69.0
	tolerance degree : +- 4.0
Rack travel in mm : 0.50	+
Tolerance mm : + 0.20	Setting point w/out bumper spring
anvarnan anri-	Dotted aread trans. (720
governor spring	Rated speed rpm : 325
pre-tension click setting x : 3.00	rack travel mm : 8.00 Tolerance mm : + 0.10
CLICK SELLING X . S.UU	T TOTAL CONTINUE THAT I TO THE OF THE
	Rated speed rpm : 100
FULL LOAD DELIVERY AT FULL LOAD S	
	+ CRT mm min. : > 19.50
Rated speed rpm : 1250	+
Aneroid pressure	+ Testing:
hPa : -	+
Del. quantity	+ Rated speed rpm : 325
cm3/1000 strokes : 76.0	+ rack travel mm : 8.50 + Tolerance mm : + 0.10
Tolerance	† Tolerance mm : +- 0.10
cm3/1000 strokes : +- 1.0	†
Check tolerance	rack travel mm : 2.00 Rated speed rpm : 473
cm3/1000s. : +- 3.0	+ Rated speed rpm : 473
Spreed Toloranos	Tolerance 1/min : +- 30
Tolerance cm3/1000 strokes : 3.5	
しゅう はしし さいせんだい こうご	T
	+ TORQUE CONTROL

Rated speed rpm : 1250 rack travel mm : 11.35 Tolerance mm : **←** 0.05

Rated speed rpm : 750

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quantity cm3/1000 strokes : 125.0

Tolerance

cm3/1000 strokes : \leftarrow 7.5

Check tolerance

cm3/1000s. : ← 10.0

LOW IDLE

Rated speed rpm : 325

Rack travel in mm: 8.50 Tolerance mm : +- 0.10 bel. quantity cm3/1000 strokes : 11.5

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000S. 4.5

Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 28.07.98 : ISO 4713

Combination No. : 0 400 876 434

Injection pump

Pump designation : PES6A95D410RS2864 EF type number : 0 410 896 888

Governor

Governer design. : RSV400...1050A8C2263

: -11L

Governer no. : 0 420 232 635

Cust. part No. : 87 801 607

Customer-spec. information : NH Customer Motor : P 396

Power KW : 176.0

TEST BENCH REQUIREMENTS

Inlet line : 1.3

Test oil inlet

40 temp. °C : **←** 2.0 Tolerance °C

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : - 1.0

Prestroke mm : 2.60 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm: 10.50 Tolerance mm : +- 1.50

Firing order : 1-5-3-6-2-

: 0-60-120-180-240 Phasing

: -300 : +- 0.50 Tolerance

Check

: +- 0.75 tolerance "NW

Start of delivery mark

Tolerance : +- 0.50

Check

: **←** 0.75 tolerance °NW

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.75

Tolerance mm : +- 0.10

Del. quantity + cm3/1000 strokes : 137.0 +	Aneroid pressure hPa : 1200
Tolerance + 1.0 +	Del. quantity cm3/1000 strokes : 137.0 Tolerance
Check tolerance cm3/1000s. : +- 3.0	cm3/1000 strokes : +- 1.0 Check tolerance cm3/1000s. : +- 3.0
Spreed	Spreed Tolerance
Tolerance cm3/1000 strokes : 3.5	cm3/1000 strokes : 3.5 Check tolerance cm3/1000S. : 8.0
Check tolerance	
cm3/100Cs. : 8.0	CONTROL LEVER
+	control lever
Rated speed rpm : 450	position degree : 98.0 tolerance degree : +- 4.0
Rack travel in mm: 5.50	toterance degree . +- 4.0
Tolerance mm : + 0.10	ACCEPTED A CONTENTION OF THE
Del. quantity + cm3/1000 strokes : 12.0 +	ASSEMBLY GOVERNOR SETTING
Tolerance	Rated speed rpm : 1095
cm3/160G strokes : + 2.0 + Check tolerance	rack travel mm : 10.60
cm3/1000S. : +- 4.5	Rated speed rpm : 1165
Spreed +	Tolerance 1/min : +- 5
Tolerance + cm3/1000 strokes : 5.5	rack travel mm: : 4.00
Check tolerance	rack travel mm : 0.85
cm3/1000s. : 9.0	Tolerance mm : +- 0.55
1	Rated speed rpm : 1300
(B) SETTING OF INJECTION PUMP	
WITH GOVERNOR +	Rated speed rpm : 1096
<u> </u>	rack travel mm : 10.60
	Rated speed rpm : 1166
GUIDE SLEEVE POSITION +	Tolerance 1/min : +- 5
1	rack travel mm : 4.00
control lever	rack travel mm : 0.85 Tolerance mm : +- 0.55
position degree : -3	Tolerance mm : +- 0.55
Rated speed rpm : 800	Rated speed rpm : 1300
Rack travel in mm: 0.50	
Tolerance mm : \leftarrow 0.20 $+$	Rated speed rpm : 1097 rack travel mm : 10.60
governor spring	rack travel mm : 10.60
pre-tension +	Rated speed rpm : 1167
click setting x : 4.50	Tolerance 1/min : +- 5
+	rack travel mm : 4.00
FULL LOAD DELIVERY AT FULL LOAD STOP	rack travel mm : 0.85
+	Tolerance mm : +- 0.55
Rated speed rpm : 700	Rated speed rpm : 1300
+	

†	
Rated speed rpm : 1098 + rack travel mm : 10.60 +	TORQUE CONTROL
Tack travel iniii . 10.00	
Rated speed rpm : 1168	Rated speed rpm : 700 rack travel mm : 13.75
Tolerance 1/min : + 5	rack travel mm : 13.75 Tolerance mm : +- 0.10
rack travel mm : 4.00	
+	Rated speed rpm : 500
rack travel mm : 0.85	rack travel mm : 13.80
Tolerance mm : + 0.55	Tolerance mm : + 0.10
Rated speed rpm : 1300	Rated speed rpm : 1050
I	rack travel mm : 11.20
Rated speed rpm : 1099	rack travel mm : 11.20 Tolerance mm : +- 0.05
Rated speed rpm : 1099 rack travel mm : 10.60	
+	Rated speed rpm : 1050
Rated speed rpm : 1169	rack travel mm : 12.00 Tolerance mm : + 0.10
Tolerance 1/min : + 5	Tolerance mm : + 0.10
rack travel mm : 4.00	
rack travel mm : 0.85	ANEROID/ALTITUDE
Tolerance mm : +- 0.55	COMPENSATOR TEST
Rated speed rpm : 1300	
+	
1100	SETTING
Rated speed rpm : 1100 + rack travel mm : 10.60 +	Dated aread are
rack travet mm : 16.60	Rated speed rpm : 500 Pressure hPa : 1200
Rated speed rpm : 1170	rack travel mm : 13.80
Tolerance 1/min : + 5	Tolerance mm : +- 0.10
rack travel mm : 4.00	
+	Rated speed rpm : 500
rack travel mn : 0.85 +	Pressure hPa : - rack travel mm : 11.00
Tolerance mm : + 0.55 + Rated speed rpm : 1300 +	rack travel mm : 11.00
Rated speed rpm : 1300	Tolerance mm : +- 0.05
	MEASUREMENT
LOW IDLE	
+	Rated speed rpm : 500
†	
control lever	Pressure hPa : 700
position degree : 78.0 + tolerance degree : +- 4.0 +	rack travel mm : 12.85 Tolerance mm : + 0.05
toterance degree . •= 4.0	roterative min . +- 0.05
Setting point w/out bumper spring	Pressure hPa : 600
+	rack travel mm : 11.90
Rated speed rpm : 450 +	Tolerance mm : + 0.20
rack travel mm : 5.00	
Tolerance mm : + 0.10	
Testing:	FUEL DELIVERY CHARACTERISTICS
reserve.	FOLE DELIVERY CHARACTERISTICS
Rated speed rpm : 450	With the state of
rack travel mm : 5.50 Tolerance mm : + 0.10	Aneroid pressure
Tolerance mm : + 0.10 +	hPa : -
made August and 1 2 00	Rated speed rpm : 500
rack travel mm : 2.00 + Rated speed rpm : 585 +	Del. quantity cm3/1000 strokes : 98.5
Tolerance 1/min : +- 30	Tolerance
+	cm3/1000 strokes : +- 1.0
· ·	

Check tolerance

: +- 3.0 cm3/1000s.

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 20.25 Tolerance mm : + 0.75

Del. quartity

cm3/1000 strokes : 164.0

Tolerance

cm3/1000 strokes : + 8.0

Check tolerance

cm3/1000s. : +- 11.0

LOW IDLE

Rated speed rpm : 450

Rack travel in mm : 5.50 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 12.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0

Check tolerance

: +- 4.5 cm3/1000s.

Spreed Tolerance

cm3/1000 strokes : 5.5 Check tolerance

9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 25.07.98

Test oil

: ISO 4113

Combination No. : 0 400 876 437

Injection pump

Pump designation : PES6A95D32ORS2806

EP type number : 0 410 896 898

Governor

Governer design. : RSV375...1125A0C900R

Governer no. : 0 420 233 353

Cust. part No. : 8368 54720

Customer-spec. information Customer : SISU

Motor

: 620D

Power KW

: 88.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C

40

Tolerance °C

: +- 2.0

Overflow valve : 1 419 992 198

Inlet press. bar : 1.5

Test nozzle holde

assembly

: 0 681 343 009

Opening pressure

bar

: 173.5

Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar: 26.0 Tolerance bar : +- 1.0

Prestroke mm : 2.55
Tolerance mm : + 0.05

Check

tolerance mm : \leftarrow 0.10

Rack travel in mm: 10.50

Tolerance mm : ← 1.50

Firing order : 1-5-3-6-2-

Phasir:g

: 0-60-120-180-240

: -300

Tolerance

: **←** 0.50

Check

tolerance °NW

: +- 0.75

Beginning of delivery differende

Difference ° CS : 5.00

BASIC SETTING

Rated speed rpm : 1100

Rack travel in mm : 9.05

Tolerance mm : +- 0.05

Del. quantity

cm3/1000 strokes : 74.0

Tolerance

cm3/1000 strokes : \leftarrow 1.0

Check tolerance cm3/1000s. : +- 3.0	+ Check tolerance + cm3/1000s. : + 3.0 + Spreed
Spreed	Tolerance : 3.5
Tolerance cm3/1000 strokes : 3.5	Check tolerance cm3/1000s. : 8.0
Check tolerance cm3/1000S. : 8.0	<u> </u>
	+ CONTROL LEVER
Rated speed rpm : 375	control lever position degree : 90.0 tolerance degree : +- 4.0
Rack travel in mm : 4.00	+
Tolerance mm : + 0.10	+ RATED SPEED
Del. quantity cm3/1000 strokes : 14.0	+ rack travel mm : 8.00 + Rated speed rpm : 1145
Tolerance	+ Tolerance 1/min : +- 5
cm3/1000 strokes : +- 2.0	+
Check tolerance	+ rack travel mm : 4.90
cm3/1000s. : +- 4.5	+ Rated speed rpm : 1195
Spreed Tolerance	† Tolerance 1/min : +- 15
cm3/1000 strokes : 5.5	rack travel mm : 0.85
Check tolerance	+ Tolerance imm : + 0.55
cm3/1000s. : 9.0	Rated speed rpm : 1350
	†
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	+ rack travel mm : 4.00 + Rated speed rpm : 1200 + Tolerance 1/min : + 15 +
GUIDE SLEEVE POSITION	LOW IDLE
	+
control lever	+
position degree : - 3 Rated speed rpm : 800	+ control lever
Rated speed rpm : 000	<pre>position degree : 71.0 tolerance degree : + 4.0</pre>
Rack travel in mm : 0.50	+
Tolerance mm : +- 0.20	Setting point w/out bumper spring
governor spring	Rated speed rpm : 375
pre-tension	+ Rated speed rpm : 375 + rack travel mm : 3.50 + Tolerance mm : + 0.10
click setting x : 4.00	† Tolerance mm : +- 0.10
FULL LOAD DELIVERY AT FULL LOAD STOP	Rated speed rpm : 100
B	+ CRT mm min. : > 19.50
Rated speed rpm : 1100 Aneroid pressure	Testing:
hPa : - Del. quantity	Potent award awar 775
cm3/1000 strokes : 74.0	+ rack travel mm : // OO
Tolerance	Rated speed rpm : 375 rack travel mm : 4.00 Tolerance mm : + 0.10
cm3/1000 strokes : +- 1.0	+
	+ rack travel mm : 2.00

Rated speed rpm	:	455
Tolerance 1/min	:	← 30

T	ORQUE	CONTROL

Rated speed rpm	:	1100
rack travel mm	:	9.05
Tolerance mm	:	← 0.05

Rated speed rpm	:	500
rack travel mm	:	9.35
Tolerance mm	: +	- 0.05

Rated speed rpm	:	980
rack travel mm	:	9.00
Tolerance mm	: +	- 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid	pressure

nra		_
Rated speed rpm	:	500
Del. quantity		

Tolerance

cm3/1000 strokes : + 2.0

Check tolerance

cm3/1000s. : +- 4.0

STARTING FUEL DELIVERY

Raited speed rpm	:	100
rack travel mm	:	20.25
Tolerance mm	: +	- 0.75
Del. quantity		

cm3/1000 strokes : 195.0

Tolerance

cm3/1000 strokes : \leftarrow 8.0

Check tolerance

cm3/1000s. : \leftarrow 11.0

LOW IDLE

Rated speed rpm : 375

Rack travel in mm : 4.00 Tolerance mm : + 0.10

Del. quantity

cm3/1000 strokes : 14.0

Tolerance

cm3/1000 strokes : +- 2.0

Check tolerance

cm3/1000S. : +- 4.5 Spreed

Tolerance

cm3/1000 strokes : 5.5

Check tolerance

cm3/1000s. : 9.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 02.07.*9*8 : ISO 4113

Combination No. : F 002 A0Z 097

Injection pump

Pump designation : PES6A100D320/3RS3517

EP type number : F 002 A10 036

Governor

Governer design. : RSV550...750A7C983R

Governmen no. : F 002 A26 027

Cust. part No. :

Customer-spec. information Customer : TATA Motor : 6BT Power KW : 86.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet

temp. °C : 40
Tolerance °C : +- 2.0

Overflow valve : 9 451 037 430

Inlet press. bar : 2.0

Test nozzle holde

: 1 688 901 101 assembly

Opening pressure

: 208.5 bar Tolerance bar : +- 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

x inside diameter : 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar: 17.0 Tolerance bar : ← 1.0

Prestroke mm : 3.10 Tolerance mm : + 0.05

Check

tolerance mm : +- 0.10

Rack travel in mm : 10.50 Tolerance mm : + 1.50

Firing order : 1-5-3-6-2-

: 4

Phasing : 0-60-120-180-240

: -300 : +- 0.50

Tolerance Check

tolerance °NW : +- 0.75

Start of delivery blocking

"NW after s.o.d. : 9.00 Tolerance : \leftarrow 0.10

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 730

Rack travel in mm : 12.20 Tolerance mm : +- 0.05

Rack travel in mm: 4.95 Tolerance mm : + 0.10 (B) SETTING OF INJECTION PUMP WITH GOVERNOR GUIDE SLEEVE POSITION control lever position degree : FREE Rated speed rpm : 800 Rack travel in mm : 0.50 Tolerance mm : + 0.20 governor spring pre-tension click setting x : 3.75CONTROL LEVER control Lever position degree : 83.0 tolerance degree : +- 4.0 RATED SPEED rack travel mm : 11.20
Rated speed rpm : 750
Tolerance 1/min : + 5 rack travel mm : 4.00 Rated speed rpm : 780 Tolerance 1/min : + 5 rack travel mm : 0.85
Tolerance mm : + 0.55
Rated speed rpm : 850 rack travel mm : 4.0 Rated speed rpm : 780 4.00 Tolerance 1/min : +- 15 LOW IDLE control lever

Control lever difference Grad 11.0 tolerance degree : + 6.0 Setting point w/out bumper spring Rated speed rpm : 550 rack travel mm : 3.9 3.95 Tolerance mm : ← 0.10 Rated speed rpm : 100 CRT mm min. : > 19.00 Testing: Rated speed rpm : 550 rack travel mm : 4.95 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 575 Tolerance 1/min : + 30 TORQUE CONTROL Rated speed rpm : 730
rack travel mm : 12.20
Tolerance mm : + 0.05 STARTING FUEL DELIVERY Rated speed rpm : 100 rack travel mm : 13.40 Tolerance mm : $\leftarrow 0.50$ LOW IDLE Rack travel in mm: 4.95 Tolerance mm : + 0.10 End of test specification sheet

tolerance degree : +- 4.0

N16

position degree : 77.0

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition Test oil

: 27.07.98 : ISO 4113

Combination No. : F 002 A0Z 108

Injection pump

Pump designation : PES6A95D12ORS2916 EP type number : F 002 A10 010

Governor

Governer design. : RSV425...1000A0C981R

Governer no. : F 002 A20 256

Cust. part No. : 328 4546

Customer-spec. information Customer : CUMMINS

Motor

: 6BT

Power KW

: 102.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C

Tolerance °C

: +- 2.0

Overflow valve : 2 417 413 093

40

Inlet press. bar : 2.0
Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 101

Opening pressure

Tolerance bar : ← 1.5

Test lines : 1 680 750 014

Outside diameter : 6.0

N17

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values ____

BEGINNING OF DELIVERY

Test pressure bar : 17.0 Tolerance bar : + 1.0

Prestroke mm : 2.85 Tolerance mm : + 0.05

Check

tolerance mm : + 0.10

Rack travel in mm : 10.50

Tolerance min : + 1.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : +- 0.75

Start of delivery blocking

*NW after s.o.d. : 9.50

: +- 0.10 Tolerance

Check

tolerance °NW : +- 0.29

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.30

Tolerance mm : \leftarrow 0.05

	+ Aneroid pressure
Del. quantity cm3/1000 strokes : 98.2	+ hPa : 900 + Del. quantity
	+ cm3/1000 strokes : 98.2
Tolerance cm3/1000 strokes : +- 1.0	+ Tolerance + cm3/1000 strokes : +- 1.0
Check tolerance	+ Check tolerance + cm3/1000s. : + 3.0
cm3/1000s. : + 3.0	+ Spreed + Tolerance
Spreed	+ cm3/1000 strokes : 4.0 + Check tolerance
Tolerance cm3/1000 strokes : 4.0	+ cm3/1000s. : 6.0
Check tolerance cm3/1000s. : 6.0	CONTROL LEVER
	control lever
Rated speed rpm : 425	+ position degree : 95.0 + tolerance degree : + 4.0
Rack travel in mm: 5.05	RATED SPEED
Tolerance mm : + 0.10	+ rack travel mm : 10.30
Del. quantity	+ Rated speed rpm : 1040 _
cm3/1000 strokes : 18.5 Tolerance	Tolerance 1/min : +- 5
cm3/1000 strokes : $+$ 2.0	+ rack travel mm : 4.50
Check tolerance	+ Rated speed rpm : 1095
cm3/1000s. : +- 4.5	+ Tolerance 1/min : + 5
Spreed	1
Tolerance	+ rack travel mm : 0.85 + Tolerance mm : +- 0.55
cm3/1000 strokes : 6.0	· ·
Check tolerance cm3/1000s. : 8.0	Rated speed rpm : 1225
CIID/ 10003. : 6.0	Track travel mm : 4.50
	Rated speed rpm : 1105
(B) SETTING OF INJECTION PUMP WITH GOVERNOR	Tolerance 1/min : +- 15
GUIDE SLEEVE POSITION	LOW IDLE
control lever	t control lever
position degree : FREE	position degree : 78.0
Rated speed rpm : 800	tolerance degree : + 4.0
Rack travel in mm : 0.50	Control lever difference
Tolerance mm : +- 0.20	+ Grad : 17.0
	tolerance degree : +- 6.0
governor spring	+
pre-tension	+ Setting point w/out bumper spring
click setting x : 2.50	Poted aread pro : /25
	+ Rated speed rpm : 425 + rack travel mm : 4.05
FULL LOAD DELIVERY AT FULL LOAD STOP	+ rack travel mm : 4.05 + Tolerance mm : + 0.10
Rated speed rpm : 1000	Rated speed rpm : 100

N18

CRT mm min.	: > 19.00	Tolerance cm3/1000 strokes : +- 2.0 Check tolerance
Testing:		+ cm3/1000s. : +- 4.0
Rated speed rpm rack travel mm Tolerance mm rack travel mm Rated speed rpm Tolerance 1/min	: 5.05 : + 0.10 : 2.00 : 600	Aneroid pressure hPa : - Rated speed rpm : 500 Del. quantity cm3/1000 strokes : 91.5 Tolerance cm3/1000 strokes : + 1.0
TORQUE CONTROL Rated speed spm rack travel mm Tolerance mm	: 1000 : 11.30 : + 0.05	Check tolerance cm3/1000s. : + 3.0
Rated speed rpm rack travel mm Tolerance nm	: 11.80	+ STARTING FUEL DELIVERY + Rated speed rpm : 100 + rack travel mm : 20.50 + Tolerance mm : + 0.50 - Del. quantity
ANEROID/ALTITUDE COMPENSATOR TEST		cm3/1000 strokes : 121.5 Tolerance cm3/1000 strokes : + 10.0 Check tolerance
SETTING		- cm3/1000s. : + 15.0
Rated speed rpm Pressure hPa	: 500 : 900	†
Rated speed rpm Pressure hPa rack travel mm Tolerance mm	: 500 : – : 11.00 : +- 0.20	LOW IDLE Rated speed rpm : 425
MEASUREMENT		Rack travel in mm: 5.05 Tolerance mm: + 0.10
Rated speed rpm	: 500	+ Del. quantity + cm3/1000 strokes : 18.5
Pressure hPa rack travel mm Tolerance mm	: 700 : 11.70 : +- 0.20	Tolerance
Pressure hPa rack travel mm Tolerance mm	: 11.20	Tolerance cm3/1000 strokes : 6.0 Check tolerance cm3/1000s. : 8.0
FUEL DELIVERY CHA	ARACTERISTICS	<u> </u>
Aneroid pressure hPa Rated speed rpm Dei. quantity	: 900 . 750	End of test specification sheet

M19

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition

: 29.07.98

Test oil

: ISO 4113

Combination No. : 0 401 846 990

Injection pump

Pump designation : FEGP120A32CRS3118 EP type number : 0 411 826 726

Governor

Governer design. : RQV250...1100PA920

: -9

Governer no. : 0 421 814 105

Cust. part No. : 425663-P0? (P03)

Customer-spec. information

Customer : VOLVO-TRUCK Motor : THD 102 KD

Power KW

: 250.0

TEST BENCH REQUIREMENTS

Inlet line : 3.1

Vibration .

damper

(RoBo diaphragm) : 4.2

Test oil inlet

temp. °C

Tolerance °C

: **←** 2.0

Overflow valve : 2 417 413 046

Inlet press. bar :

1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly

: 1 688 901 019

Opening pressure

: 208.5

Tolerance bar : +- 1.5

N20

Test lines : 1 680 750 075

Outside diameter : 8.0

x inside diameter :

3.0

x Length mm : 1000

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0

Tolerance bar : + 1.0

Prestroke mm 2.65

: +- 0.05 Tolerance mm

Check

: + 0.10 tolerance mm

Rack travel in mm : 10.50

: +- 1.50 Tolerance mm

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

: +- 0.70 tolerance °NW

BASIC SETTING

Rated speed rpm : 700

Rack travel in mm : 13.25

Tolerance mm : \leftarrow 0.05

Del. quantity

cm3/1000 strokes : 223.0

Tolerance cm3/1000 strokes : +- 1.0	guide sleeve travel mm : 3.71 Tolerance mm : +- 0.25
Check tolerance cm3/1000s. : + 4.0	Rated speed rpm : 520 guide sleeve
Spreed	travel mm : 4.67 Tolerance mm : + 0.25
Tolerance cm3/1000 strokes : 5.0	Rated speed rpm : 1370 guide sleeve
Check tolerance cm3/1000s. : 9.0	travel mm : 11.50 Tolerance mm : +- 0.50
‡	GUIDE SLEEVE POSITION
Rated speed rpm : 250	
Rack travel in mm : 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 32.0 Tolerance	control lever position degree : - 1 Rated speed rpm : 1185 Rack travel in mm : 16.50
cm3/1000 strokes : +- 2.5 Check tolerance	Tolerance mm : + 1.30
cm3/1000s. : +- 5.0 Spreed Tolerance	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes : 5.0 Check tolerance	Rated speed rpm : 700 Aneroid pressure
cm3/1000s. : 7.0	hPa : 1200 Del. quantity
(B) SETTING OF INJECTION PUMP	cm3/1000 strokes : 223.0 Tolerance
WITH GOVERNOR	cm3/1000 strokes : +- 1.0 Check tolerance
GUIDE SLEEVE TRAVEL	cm3/1000S. : +- 4.0 Spreed
Rated speed rpm : 1146 guide sleeve	Tolerance cm3/1000 strokes : 5.0 Check tolerance
travel mm : 7.80 + Tolerance mm : + 0.25	cm3/1000s. : 9.0
Rated speed rpm : 250 + guide sleeve +	CONTROL LEVER
travel mm : 1.19 Tolerance mm : + 0.25	control lever
Rated speed rpm : 1081	position degree : 62.0 tolerance degree : +- 4.0
guide sleeve	
travel mm : 6.82 Tolerance mm : + 0.25	control lever position degree : 117.0 tolerance degree : +- 4.0
Rated speed rpm : 387 guide sleeve	RATED SPEED
travel mm : 2.96 Tolerance mm : + 0.25	rack travel mm : 12.25 Rated speed rpm : 1135
Rated speed rpm : 437	Tolerance 1/min : +- 5

rack travel mm : 4.00 Rated speed rpm : 1225 Tolerance 1/min : + 15 LOW IDLE control lever position degree : 64.0 tolerance degree : + 4.0 control lever position degree : 9.0 tolerance degree : + 4.0 Setting point w/out bumper spring Rated speed rpm : 150 CRT mm min. : > 6.20 Testina: Rated speed rpm : 250 rack travel mm : 5.20 Tolerance mm : + 0.10 Rated speed rpm : 310 TORQUE CONTROL Rated speed rpm : 700 rack travel mm : 13.25 Tolerance mm : + 0.05 ANEROID/ALTITUDE COMPENSATOR TEST SETTING Rated speed rpm : 500 Pressure hPa : 1200 rack travel mm : 13.25 Tolerance mm : + 0.05 Rated speed rpm : 500 Pressure hPa : - rack travel mm : 9.00 Tolerance mm : + 0.15

Rated speed rpm : Pressure hPa : 160 rack travel mm : 0.25 Tolerance mm : +- 0.05 FUEL DELIVERY CHARACTERISTICS

Aneroid pressure Rated speed rpm : 700 Del. quantity cm3/1000 strokes : 134.0 Tolerance cm3/1000 strokes : \leftarrow 1.0 Check tolerance cm3/1000S. : +- 4.0

STARTING FUEL DELIVERY

Rated speed rpm : 100 rack travel mm : 9.00 Tolerance mm : + 0.15

LOW IDLE

Rated speed rpm : 250 Rack travel in mm: 5.20 Tolerance mm : + 0.10 Del. quantity cm3/1000 strokes : 32.0 Tolerance cm3/1000 strokes : + 2.5 Check tolerance cm3/1000s. : \leftarrow 5.0 Spreed Tolerance cm3/1000 strokes : 5.0 Check tolerance : 7.0 cm3/1000s.

End of test specification sheet

MEASUREMENT

Note remarks

Refer to Service Info for test and adjustment instructions. See microcard(s) W400/...

Edition : 27.07.98 Test oil : ISO 4113

Combination No. : 0 402 046 861

Injection pump

Pump designation : FE6P11GAJ2GRS3329

EP type number : 0 412 016 743

Governor

Governer design. : RQ325/1300PA1150

Governer no. : 0 421 801 716

Cust. part No. : 1284420/6

Customer-spec. information

Customer : DAF

Motor Power KW : NS156M

: 156.0

TEST BENCH REQUIREMENTS

Inlet line : 3.2

Test oil inlet temp. °C : 40 Tolerance °C : + 2.0

Overflow valve : 1 417 413 025

Inlet press. bar : 1.5

Tolerance bar : + 0.1

Test nozzle holde

assembly : 1 688 901 101

Opening pressure

bar : 208.5 Tolerance bar : + 1.5

Test lines : 1 680 750 008

Outside diameter : 6.0

x inside diameter: 2.0 x length mm : 600

REMARKS

(A) INJECTION PUMP SETTING VALUES

Set equal delivery quant.

per values _____

BEGINNING OF DELIVERY

Test pressure bar : 26.0 Tolerance bar : + 1.0

Prestroke mm : 5.25 Tolerance mm : + 0.05

Check

tolerance mm : **←** 0.10

Rack travel in mm : 20.50

Tolerance mm : \leftarrow 0.50

Firing order : 1-5-3-6-2-

Phasing : 0-60-120-180-240

: -300

Tolerance : +- 0.50

Check

tolerance °NW : **←** 0.75

Start of delivery mark

Tolerance : \leftarrow 0.10

Check

tolerance °NW : + 0.75

Barrel no. : 1

BASIC SETTING

Rated speed rpm : 1000

Rack travel in mm: 11.85

Tolerance mm : + 0.05

N24

Del. quantity cm3/1000 strokes	: 144.0	Tolerance mm : + 0.10
Tolerance		+ Rated speed rpm : 590 + guide sleeve
cm3/1000 strokes	: +- 1.0	travel mm : 6.00 Tolerance mm : + 0.10
Check tolerance cm3/1000s.	: ← 4.0	Rated speed rpm : 1570
Spreed		travel mm : 11.50
= 1		† Tolerance mm : +- 0.50
Tolerance cm3/1000 strokes	: 8.0	GUIDE SLEEVE POSITION
Check tolerance		T GOING SECENE LOSTITON
cm3/1900s.	: 12.0	control lever
		position degree : 109
Rated speed rpm	: 325	Rated speed rpm : 650
		+ Rack travel in mm : 20.00
Rack travel in mm	· · · · · · · · · · · · · · · · · · ·	+ Tolerance mm : +- 0.80
Tolerance mm	: +- 0.10	+
Del. quantity		
cm3/1000 strokes Tolerance	: 26.0	FULL LOAD DELIVERY AT FULL LOAD STOP
cm3/1000 strokes Check tolerance	: +- 2.5	Rated speed rpm : 1000
cm3/1000s.	: +- 5.0	+ Aneroid pressure + hPa : 1000
Spreed		+ Del. quantity
Tolerance		+ cm3/1000 strokes : 144.0
cm3/1000 strokes	: 4.9	+ Tolerance
Check tolerance		+ cm3/1000 strokes : + 1.0
cm3/1000s.	: 8.0	+ Check tolerance
		+ cm3/1000s. : +- 4.0
		+ Spreed
(B) SETTING OF IN	IECTION DIMO	+ Tolerance
WITH GOVERNOR	SECITOR FORE	- cm3/1000 strokes : 8.0
WITH GOVERNOR		
		Check tolerance
		+ cm3/1000s. : 12.0
GUIDE SLEEVE TRAV		‡
Rated speed rpm	: 1351	
guide sleeve		+ CONTROL LEVER
travel mm	: 6.37	+
Tolerance mm	: +- 0.10	+ control lever
		position degree : 93.0
Rated speed rpm guide sleeve	: 325	tolerance degree : + 4.0
travel mm	: 1.99	T RATED SPEED
Tolerance mm	: ← 0.10	rack travel mm : 10.85
		+ Rated speed rpm : 1345
Rated speed rpm	: 1300	+ Tolerance 1/min : +- 5
guide sleeve		+ Check
travel mm	: 6.00	+ speed 1/min : +- 10
Tolerance mm	: + 0.10	+ .
		rack travel mm : 4.00
Rated speed rpm	: 427	+ Rated speed rpm : 1450
guide sleeve		+ Tolerance 1/min : +- 15
travel mm	: 3.54	10001 41100 17111111
CLOSCC UNI	. 3.34	ı

Check speed 1/min : ← 20 rack travel mm : 0.50 Tolerance mm : ← 0.50 Rated speed rpm : 1600 LOW IDLE control lever position degree : 72.0 tolerance degree : +- 4.0 Setting point w/out bumper spring Rated speed rpm : 225 CRT mm min. : > 5.90 Testing: 325 Rated speed rpm : rack travel mm : 4.50 Tolerance mm : + 0.10 rack travel mm : 2.00 Rated speed rpm : 415 TORQUE CONTROL Rated speed rpm : 1000 rack travel mm : 11.85
Tolerance mm : +- 0.05 Rated speed rpm : 700 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 1300 rack travel mm : 11.85 Tolerance mm : + 0.05 Rated speed rpm : 1000 rack travel mm : 12.85 : + 0.10 Tolerance mm ANEROID/ALTITUDE COMPENSATOR TEST

SETTING

Rated speed rpm : 600 Pressure hPa : 1000 rack travel mm : 11.85 Tolerance mm : +- 0.05

Rated speed rpm : 600 Pressure hPa 7.35 rack travel mm : +- 0.20 Tolerance mm

MEASUREMENT

600 Rated speed rpm :

Pressure hPa : rack travel mm : 370 10.75 Tolerance mm : +- 0.05

: 200 Pressure hPa 8.55 rack travel mm : Tolerance mm : + 0.10

FUEL DELIVERY CHARACTERISTICS

Aneroid pressure

hPa 1000 Rated speed rpm : Del. quantity

cm3/1000 strokes : 145.0

Tolerance

cm3/1000 strokes : \leftarrow 2.0 Chack tolerance

: +- 5.0 cm3/1000s.

rack travel mm : 11.85 Tolerance mm : + 0.05

Aneroid pressure

Rated speed rpm : 1000

Del. quantity cm3/1000 strokes : 94.0

Tolerance

cm3/1000 strokes : +- 1.0 Check tolerance

: +-3.5 cm3/1000s.

LOW IDLE

Rated speed rpm : 325

Rack travel in mm : 4.50 Tolerance mm : + 0.10

N26

Del. quantity cm3/1000 strokes	:	26.0
Tolerance cm3/1000 strokes Check tolerance	: +-	2.5
cm3/1000s.	: +-	5.0
Tolerance cm3/1000 strokes Check tolerance	:	4.0
cm3/1000s.	:	8.0